

II.

NOTES ON THE RELICS OF THE VIKING PERIOD OF THE NORTHMEN
IN SCOTLAND, ILLUSTRATED BY SPECIMENS IN THE MUSEUM.
By JOSEPH ANDERSON, KEEPER OF THE MUSEUM.

In this paper I propose shortly to notice the remains we have in Scotland which belong to the Viking Period of the Northmen, corresponding to the later Iron Age of the Scandinavian archaeologists, and to allude to their bearing on the chronology of Scottish archaeology.

During my visit, the summer before last, to the splendid national collections at Copenhagen, Stockholm, and Christiania, my attention was specially attracted to certain classes of relics, of which occasional specimens occur on this side the North Sea. With some of these I had been familiar in the north of Scotland, and with others I had become familiar as specimens in the Museum, which from their special peculiarities did not fall naturally into the series of our Scottish relics.

It has occurred to me that the grouping together of these relics of a peculiar period in the history of our country may be useful in two ways.—We have definite dates which form the limits, in both directions, of their age. If they can be shown to be Scandinavian (I speak of those dug up on Scottish soil), they cannot be older than the last quarter of the eighth century, when the Scandinavian incursions on the Scottish shores begin to be recorded in the Irish and Norwegian annals; while the introduction of Christianity among the heathen Northmen, in the first quarter of the eleventh century, marks the period to which their pagan customs, and specially the custom of cremation, descended in the north and west of Scotland.

I have some hope, also, that directing attention to this group of relics may help to open up an inquiry into the special characteristics of early Celtic and Scandinavian art, as exemplified in the enrichment of their metal work, with the view of enabling us to determine with more precision what is Celtic and what is Scandinavian.

The specific differences, however, between the earlier stone implements of Scandinavia and those of Scotland are strongly marked. The most striking characteristic of our early stone series is the paucity of flint

implements of the larger kinds; while the abundance of these is the most striking feature of the Scandinavian collections. In our Scottish flint finds we meet with none of the long, straight-sided, round-topped flint celts; none of the thick, fusiform spear-heads; none of the finely worked, ripple-flaked flint knives or daggers, with delicately crimped handles—blade and handle admirably fashioned from a single long flake; and none of the crescentic “scrapers” so common in Scandinavia.

Similarly, among our bronze finds we do not meet with a single specimen of the distinctively Scandinavian sword of bronze, with the long heavy blade of nearly equal width throughout, a tang for the handle mounted with a cylindrical grip, having an expanding and flattened ornamental top, like that of our Highland dirks, and a lunated collar grasping the upper part of the blade; none of their extremely graceful, elongated palstaves; and none of their thin, razor-shaped knives, with galley-like ornamentation, and looped handle terminating in spirals. There is also in the Scandinavian collections a marked scarcity of our commonest form of leaf-shaped sword, with flat handle-plate, pierced with rivet holes; as well as of the distinctively British type of bronze spear-head, with loops, or segmental openings in the blade. Neither is there anything on the Scandinavian bronzes strictly analogous to that peculiar style of ornamentation, which in this country has been denominated “Late Celtic,” and of which so many interesting examples have been figured and described in our Proceedings¹ by Dr John Alexander Smith.

Nor have we in Scotland a single specimen of the bracteates, of the cruciform or bow-shaped fibulæ; or of the agrafes or belt mountings; or a single example of the Scandinavian style of ornament, characteristic of the early Iron Age.

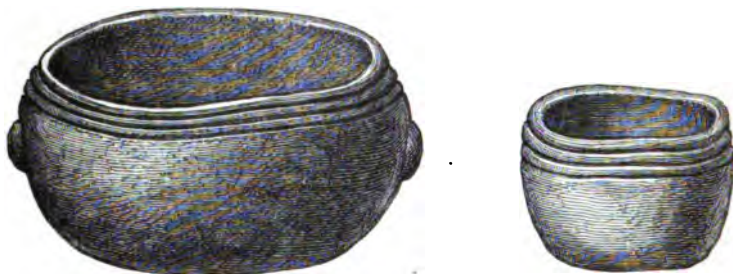
In this respect the archæological evidence is at one with the historical record, inasmuch as it gives no hint of any intercourse between Scandinavia and Britain previous to the later Iron Age, corresponding to the Viking time of the historical period.

In dealing with relics of the Viking Period found on Scottish soil, there is necessarily some difficulty in determining what is purely Scandinavian and what is purely Scottish, arising in some cases from certain forms and styles of ornament being common to both countries. But in

¹ See the Proceedings, vol. iii. p. 236, and vol. vii. p. 334.

this paper I shall confine my remarks to such objects as are shown to be Scandinavian, by their being commonly found in Scandinavia and only rarely in Scotland, and there within the area known to have been occupied by the Northmen.

I. **STONE URNS.**—We have in the Museum a very peculiar class of stone urns, found with burnt bones in them. They are often very large, always made of a soft steatitic stone, sometimes hollowed out of a single block, at other times fitted with a separate piece for the bottom, and usually bearing marks of having been fashioned and dug out with a metal

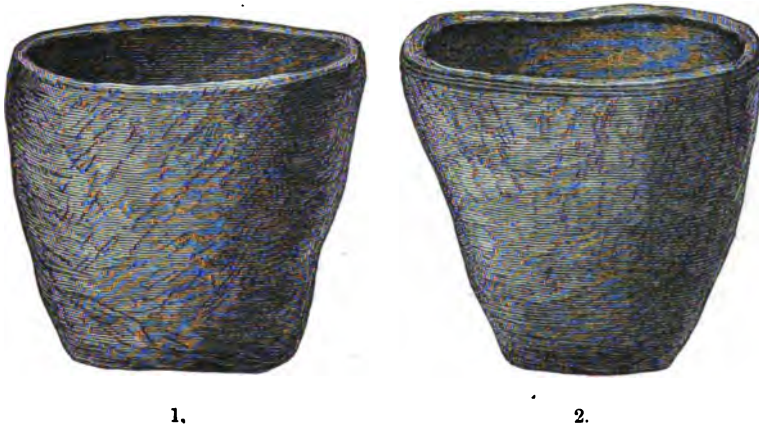


Stone Urns or Vessels found at Aucorn, Caithness
(21 inches and 11½ inches in diameter).

chisel. No specimens of these exist in any of the English or Irish collections. Those in our collection are as follows:—

1. Two stone vessels turned up by the plough on the farm of Aucorn, in the parish of Wick, Caithness, and presented to the Museum, in March 1853, by Mr A. H. Rhind. The smaller was enclosed within the larger, and covered with a stone lid, which was broken by the discoverer and thrown away. Unfortunately, the contents were neither examined nor preserved; but Mr Rhind states that it has since been observed that the grain grows richer and greener on the spot where the vessels were turned

up than anywhere else in the field, from which it may be inferred that the spot was the site of an interment by cremation. The larger vessel, which is bowl-shaped, measures 13 inches in height and 21 inches in diameter. It has two handles cut in its sides, and is ornamented round the rim by a double row of incised lines. The smaller urn is of the same form, and similarly ornamented, but without handles. It is $11\frac{1}{2}$ inches in diameter and 8 inches high. They were in all likelihood, in the first instance, vessels of domestic use.



1.
2.
Large Stone Urns containing Burnt Bones--(1) Found in a Tumulus at Stennis,
(2) Found in a Cist in Stronsay, Orkney.

2. A large stone urn, found in a tumulus close to the great circle of standing-stones at Stennis in Orkney, and presented to the Museum, in December 1854, by Mr Farrer, M.P. This remarkable specimen, which is here figured along with the one found in Stronsay (No. 11 of this series), is 20 inches high, and $22\frac{1}{2}$ inches diameter across the mouth, tapering considerably towards the bottom. It has been hollowed out of a single block of steatite by a metal tool, the marks of which are quite visible in the inside of the vessel. It has an incised border round the

outside of the rim, similar to the two vessels found at Aucorn. A considerable quantity of its contents are still preserved with it, and it will be seen on examination that they consist entirely of burnt bones, partially vitrified, and run together into lumps. The barrow in which this stone vessel was found is the "plum-cake tumulus," described by Capt. Thomas in his Celtic "Antiquities of Orkney."¹ It was 62 feet in diameter and about 9 feet in height, circular and flat on the top, the sides being sloped at a high angle. The urn was found in a cist composed of large stones, the side stones being about 6 feet in length, and the end stones about 2 feet long. The interior of the cist, however, was only about 2½ feet long, 2 feet wide, and 2 feet deep. It was not placed in the centre of the tumulus, but nearer to one side, and about 3 feet above the level of the ground. Another cist, containing a clay urn of the usual Celtic form, 5 inches high and 5 inches diameter, was found nearer the centre of the tumulus. I am therefore inclined to think that it was the original interment for which the tumulus was reared, and that the stone urn was a secondary interment in the tumulus.

3. An urn of steatite, somewhat oval-shaped, 11 inches diameter and 7½ inches in height, half-full of calcined bones, found in a tumulus in the island of Rousay, Orkney, and presented to the Museum, in July 1860, by David Balfour, Esq. of Balfour and Trenabie. It is also ornamented round the outside of the rim with an incised band.

4. The broken portions of a large urn, of similar character to those described above, found in one of the cists overlying the ruins of the Broch of Okstrow (*Haugster How*), Birsay, Orkney, which are now in the Museum, having been purchased at the sale of the Kirkwall Museum, and presented to our national collection by David Balfour, Esq., of Balfour and Trenabie, in January 1863. In one of these cists a small fragment of a bronze or brass ring was found; and Mr Petrie states that on the covering stone of another a bird was carved, "described by an intelligent person who saw it as resembling an eagle." Mr Petrie suggests that it may have been a raven.²

¹ *Archæologia*, vol. xxxiv. p. 110; see also Mr Petrie's paper in the *Proceedings*, vol. ii. p. 59.

² See Mr Petrie's papers in the *Proceedings*, vol. ii. p. 60; and in the "*Archæologia Scotica*," vol. v. p. 71.

In my paper on the Brochs of Scotland,¹ I have alluded to the interesting fact of a cemetery of short cists overlying the ruins of this Broch, —a fact which has been frequently cited as significant of the high antiquity of the occupation of the Broch. This stone urn is an additional confirmation of the views I have expressed in that paper as to the age of these cists, and I can no longer hesitate to regard them as belonging to the period of the Norse Paganism in Orkney, and consequently dating between the eighth and tenth centuries. Since that time the interesting collection of relics found in the Broch itself has been presented to the Museum by Mr Henry Leask of Boardhouse, by whom it was excavated. Among these were several pieces of red Samian ware. One of these, part of a well-known form of the vessels usually manufactured in this ware, has been mended by clamps passed through small holes drilled in the sides of the vessel. This shows that the inhabitants of the Broch prized the ware, which undoubtedly was rare in the regions beyond the Roman province, and it dates the occupation of the Broch conclusively as not much later than the Roman time; while the people who buried their dead over the ruins of the dwelling in which the Samian ware was cherished as a prized possession, may have been a century or two later still, which brings us down to the period of the early Vikings in Orkney.

5. The fragments of another urn of similar character, found at Birstane, St Ola, Orkney, are also in the museum, presented at the same time by Mr Balfour of Trenaby.

6. A set of fragments, the gift of the same donor, from Sanday, Orkney.

7. The fragments of a similar urn, also from Sanday, Orkney, presented at the same time by Mr Balfour of Trenaby.

8. The bottom of an urn of steatite, found at Lopness in Sanday, also presented by Mr Balfour.

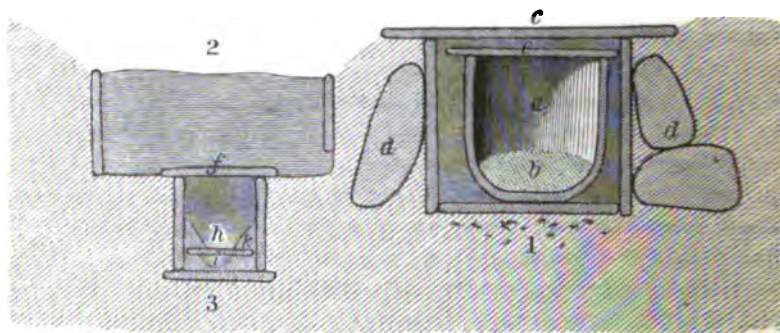
9. In 1855 Mr William Fotheringham, the proprietor of the farm of Newbigging, near Kirkwall, informed Mr Petrie that he had accidentally discovered on his farm a cist containing a stone urn, of oval shape, about 9 inches diameter and 9 inches deep, flat in the bottom, and perforated by three or four holes. When found, the urn had a quantity of ashes and burnt bones in it. It was left exposed, and was smashed by some boys.²

¹ *Archæologia Scotica*, vol. v. p. 176.

² *Proceedings*, vol. vi. p. 411.

10. The fragments of a large stone urn found in the ground, but without any cist, at "Orem's Fancy," in the island of Stronsay, Orkney, presented to the museum in 1870 by Mr George Petrie, Corr. Mem. S.A. Scot.

11. A large stone urn of an oval form, $20\frac{3}{4}$ inches wide at the mouth in the longest diameter, and 18 inches in the shortest, narrowing to 15 inches across the bottom, and 17 inches deep, was found in a cist at Orem's Fancy, in the island of Stronsay, by Mr Petrie,¹ and sent to the museum in fragments. It has been reconstructed, and is figured on page



1. Cist with Stone Urn, Stronsay.—*a*. Urn, seen in section, 17 inches deep.
b. Burnt bones in the urn. *c*. Cist of flagstones, 2 feet square.
d. Boulder stones supporting sides of cist.
 2 and 3. Double Cist with burnt bones, close to No. 1.

539 along with the urn found at Stennis. I have here added a figure showing a section of the cists at Orem's Fancy, as explored by Mr Petrie. The stone urn (*a*) was found in a cist (*c*) about 2 feet square and the same in depth. It was covered by a piece of thin clay-slate, rudely dressed to a circular shape, and was filled to a depth of about half a foot with burnt bones (*b*).

12. Another urn nearly of the same size but thinner and more irregularly shaped, which was found in the same place at the same time, is also in the Museum in fragments.

¹ Proceedings, vol. viii. p. 341.

13. On 19th May 1834, Professor Thomas S. Traill presented to the Society¹ "the fragments of a sepulchral urn, of very large size, found in a small green tumulus in the island of Westray, Orkney. The bottom of it was broken by a pick-axe at the time of the discovery. Its mouth and sides were then entire, but have since been broken. It measured 6 feet in circumference at the mouth. Its form was oval, measuring 2 feet in its widest diameter, and 1 foot 8 inches in another. The sides were 1½ inch thick. The tumulus, near the surface of which it was found, is called Wilkie's Knowe, and is the property of George Traill, Esq. of Holland." On 13th April 1835 there was read to the Society, by Mr M. Paterson, an account of the large sepulchral vase found in a tumulus at Westray, Orkney, and presented to the Society by Dr T. S. Traill.²

14. In the month of August 1863, when some excavations were being made on the summit of a hill called the "Meikle Heog" (*Mikill Haug*), near Haroldswick, in the island of Unst, Shetland, for the purpose of planting a flagstaff as a fishing signal, "the labourers broke into a place of sepulture bounded about with large upright flagstones, and enclosing a large number of human skulls and bones."³ The attention of the late Mr Edmonston of Bunness was attracted to this discovery, and further excavation brought to light another "narrow chamber," similarly formed with upright slabs, and covered by a lintel slab about 3 feet long and 1 foot wide. Unfortunately there is no record of the dimensions of this chamber. In it were found a human skull, some bones of the ox, and six "urns" or vessels of steatite. They were of different shapes and sizes, as follows:—⁴

(1.) A flat-bottomed pot, with irregularly formed sides, 5½ to 7 inches in height, rudely bulging, and having an unsymmetrical four-square outline. (This form is well known in Norway.) Mr G. E. Roberts, who describes these vessels in the "Memoirs of the Anthropological Society," says of this one—"It is cracked and blackened externally from the action of fire, and seems to have been an ordinary boiling pot of the tribe."

¹ MS. Minutes of the Society's Proceedings.

² "Archæologia Scotica," vol. iv. App. p. 26.

³ In one of the graves opened on the Meikle Heog (but it is uncertain which) two beautiful circular bronze brooches of the Scandinavian form were found. They are now in the museum at Lerwick.

⁴ "Memoirs of the Anthropological Society of London," vol. i. p. 296.

(2.) A tolerably symmetrical four-square vessel, thinner and more carefully shaped, flat bottomed, with slightly bulging lip. It measures $5\frac{1}{2}$ inches in length and $5\frac{1}{4}$ in width, and is $3\frac{1}{2}$ inches high, tapering till the base presents an area of $4\frac{1}{4}$ inches in length and $3\frac{1}{2}$ inches in width.

(3.) A rude thick vessel, of the same form, $6\frac{1}{2}$ inches long, $4\frac{1}{2}$ inches high, and the same in width.

(4.) A wide tub-shaped pot, oval in the rim, $4\frac{1}{2}$ inches deep and $4\frac{1}{2}$ inches long, by $3\frac{3}{4}$ inches wide.

(5.) An oval-shaped vessel, $4\frac{1}{2}$ inches long, 3 inches broad, and $2\frac{1}{2}$ inches high.

(6.) A neatly-shaped vessel measuring $4\frac{1}{2}$ inches in length by 4 inches in width, and $3\frac{1}{2}$ inches deep, tapering to a base of 2 by $2\frac{1}{2}$ inches. It is ornamented by two indented lines scored round it underneath the rim.

15. In February 1829, a portion of a vessel of steatite, found in a stone cist in a tumulus on the island of Uyea, Shetland, was presented to the Museum by William Mouat Cameron, Esq. In his letter to the Secretary (read to the Society, March 23, 1829), he states that the discovery was made in 1821, and that six urns, filled with human bones and ashes, were found in the tumulus. It is thus referred to by Dr Hibbert:¹—"On landing at Uyea, I learned that a barrow had been recently opened which contained urns of an interesting description. One of these I had indeed seen, when I was on a visit to Mr Leisk of Lunna. It was a well-shaped vessel, that had been apparently constructed of a soft magnesian stone, of the nature of the *Lapis Ollaris*. The bottom of the urn had been wrought in a separate state, and was fitted to it by means of a circular groove. When found it was filled with bones partly consumed by fire. The barrow was most probably of Scandinavian origin."

16. Four or five pots or vessels of stone, presumably of the same form and character, were found at Quendale, Shetland, in 1830, along with the silver armlets and Anglo-Saxon coins of Ethelbert, Athelstane, &c., as subsequently to be noticed. They were not preserved.

17. There are in the Museum a number of fragments of steatite pots or

¹ Hibbert's "Shetland," p. 412. Other two are described by Dr D. Wilson in his "Prehistoric Annals," vol. i. p. 205. A portion of a sculptured stone which covered a steatite urn in Uyea is in the Museum (see Proc. vol. vii. p. 425), it was found at Stackaberg in digging stones for the Manor House of Uyea. A number of steatite urns, containing burnt bones and ashes, were found.—*Journal of Archaeol. Assoc.*, vol. xix. p. 312.

vessels dug up in the island of Unst, as noticed in the communication by the late Mr Thomas Edmonston of Bunes in the Proceedings, vol. ix. p. 284. They were found in two ancient burying places in that island called Bardle's (St Bartholomews?) Kirk and the Runie¹ of Valsgarth (from the Old Norse *hraun*, a heap or cairn), and when found were filled with burnt bones.

These instances from Caithness, Orkney, and Shetland, the old home of the Scandinavian Vikings—may suffice to show the character of these peculiar stone vessels accompanying interments of the heathen time.²

Up to the time of my visit to Scandinavia, I believed that this was merely a variety of our Scottish sepulture after the cremation of the body, in which the clay urns, which are its usual accompaniments, had given place to those of steatite, from local circumstances. I had been puzzled, however, to account for the occurrence of these steatite "pots" in the brochs and ancient burial mounds of Caithness, where there is no native steatite to be found; but, when I went to Christiania, I was surprised to find in the Museum there a large number of similar steatite urns, all filled with burnt bones, sometimes with an iron sword bent three or four times on itself and laid above the bones. Many of these stone vessels had iron hanks riveted round their rims, and iron bow handles hooked into them exactly as the handles are hooked upon our culinary pots. I said to Professor Rygh, the Curator of the Museum, "these must have been culinary pots, and yet they seem to have been used as cinerary urns." "Oh, yes," he said, "we are constantly finding them so used in our grave-mounds of the later Viking period."

I have noted from Nicolaysen's "*Norske Fornlevninger*" a large number of instances of their occurrence in Norway, of which it may be useful to cite the following:—

1. At Thorshof, in the parish of Gjerdum, and district of Akershus, there are many burial mounds. In one of these, in the year 1837, there were found a

¹ Compare with this the "*Rune Pictorum*" of the charter of Alexander II. of the lands of Burgyn, Morayshire, to the monks of Kinloss, which is glossed as "the Carn of the Pechts Fieldis," and the Runetwethel of the same charter.—*Regist. Moraviense*, App. No. 4, and *Records of the Monastery of Kinloss*, Preface, p. xxvii.

² Many more examples might be adduced both from Orkney and Shetland. Mr Petrie has a number of these steatite urns with their contents in his collection at Kirkwall. Wallace notices one as having been found in Stronsay before 1693.

spear-head, two axe-heads, two stirrups, and two bridle-bits, all of iron, and a vessel of steatite, with the remains of its iron handle. The vessel had ashes in it. (*Norske Fornlevninger*, p. 50.)

2. At Hof, in the district of Hedenmarken, round the church are several grave-mounds. In some of these there were found, in 1842, four axe-heads, three spear-heads, fragments of two double-edged swords, a pair of stirrups, two bridle-bits, ten arrow-points, a fire-steel, fragments of a shield-boss, a ring, a kind of pincers, and other fragments, all of iron, along with two vessels of steatite, the one having an iron handle, and the other containing burnt bones and oxidised iron fragments. (*N. F.* p. 57.)

3. In the neighbourhood of Gunnarsby in the district of Jarlsberg and Laurvik, there were found in 1859, in a small stone cairn, among charcoal and ashes, a single-edged sword, an axe-head, a spear-head, a shield-boss, and a double axe-head, all of iron, with a ring-brooch of brass, a bead of opaque glass ornamented with yellow streaks, and a vessel of steatite. (*N. F.* p. 200.)

4. At Thioto, in the district of Nordland, there were found, in 1828, in a stone-chamber occupying the centre of a grave-mound, an axe-head and spear-head of iron, the skeleton of a man in a sitting position, and, at his feet, a vessel of steatite, wherein lay one of a set of long-shaped dice of bone, with circular marks for the numbers 3, 4, 5, and 6 on the four long sides (see p. 547), and ten globular bone table-men, each having a hole bored from the under side to the top, and also an oxidised sword of iron. (*N. F.* p. 677.)

5. At a place called Kjæmpenhuug (the grave-mound of the Kemp or Warrior, *Eng.* champion), in the parish of Sortland in the same district, there were found in a grave-mound, in 1863, the skeleton of a man, with a two-edged sword and a single-edged sword, a knife, fragments of two other knives, two-spear heads, two axe-heads, a palstave, and a dagger-blade, all of iron, fragments of the sword-scabard, and pieces of a vessel of steatite. (*N. F.* p. 691.)

6. In the parish of Stokke, district of Laurvig, there are two groups of grave-mounds, one consisting of thirteen large and small circular mounds, and the other of eleven round and three long mounds. In one of these large long mounds there was found a brass brooch, having its upper part expanded into an oblong quadrangular plate, rounded off at the corners, a bowl-shaped brooch of brass, and the fragments of a large vessel of steatite. (*N. F.* p. 770.)

7. In a circular grave-mound at Gaarden, Ostre Alm, Hedenmark, there was found an urn or vessel of steatite with remains of its iron handle, a two-edged sword contorted and broken into three pieces, a bent spear-head of iron, an iron axe-head, two shield-bosses of iron, a bridle-bit, a pair of stirrups, a strap-buckle and two iron tags, a portion of a comb of bone, pretty long and toothed only on

one side, made of small pieces of bone held between two slips of bone rivetted together, two hemispherical table-men of bone, and a small figure in bone of an animal resembling a dog. In the urn lay ashes. (*Foreningen for Norske Fortidsmindestandere Bevaring*, 1866, p. 88.)

8. At Nordby Sagbrug, Akershus, there were found in a small low grave-mound, the pieces of a bowl-shaped urn of steatite, 7 inches diameter, in which were ashes and burnt bones, and along with it a two-edged sword of iron, the blade $30\frac{1}{4}$ inches long, a spear-head, an axe-blade and other iron relics. (*Foren. for Norske Fortids. Bev.*, 1867, p. 49.)

9. At Elset, in Solum parish, province of Bratsberg, there was found a bowl-shaped urn of steatite of the kind so commonly occurring in graves of the later Iron Age. It had an iron hank round the rim and an iron bow-handle, and was full of burnt bones. (*Foren. for Norske Fortids. Bev.*, 1868, p. 115.)

The foregoing instances of the occurrence of these steatite vessels in Norwegian grave-mounds, will be sufficient to show how common they are, and the details of the articles found with them will serve to illustrate the character and accompaniments of a Norwegian burial of the Viking Period or the later Iron Age.

In No. 4 (given above) we find in the steatite pot, placed at the feet of the warrior, sitting in his stone-chamber, one of the set of dice with which he beguiled his leisure. It is of peculiar form, but a form which is characteristic of these interments, and belongs to the Viking time. Part of a set of dice of this peculiar form is in the collection from the Broch, or Pictish Tower of Burrian, North Ronaldsay, Orkney; presented to the Museum by Dr William Traill. One of these is here figured, and so close is its resemblance to those found in the Viking grave-mounds of Norway, that there can be little doubt that it belongs to the period of the Norwegian occupation of Orkney. In the same Broch of Burrian, the fragments of a very large steatite pot were found, which are now in the Museum. It differs in no respect from those found in cists with burnt bones in them. The natural inference is that, the latter



One of a set of dice of the Viking time found in the Broch of Burrian.
(Actual size.)

though used as cinerary urns, were in the first instance utensils of domestic use.

In the Broch of Mousa (which is recorded to have been twice occupied by Northmen¹), there was found a circular vessel of steatite, and, in a similar structure at Brough in Shetland, there was found an oval pot of steatite with handles at the ends. An almost exactly similar pot of steatite also, with handles, is figured in "Foren. til Norske Fortids. Bevaring, Aarsberetning for 1871," plate iv. It was found with a double-edged sword of the later Iron Age, in a grave-mound at Mogenes in Akershus.



Stone Vessel found at Brough,
Shetland.
(12 inches long.)

A vessel somewhat resembling the one noticed above, but probably of later date, was dug up in Unst, and sent to the Museum along with the urns obtained at Bardle's Kirk. It was found in what Mr Edmonston supposed to be the remains of an ancient habitation, and it is here figured as a specimen of a domestic vessel of steatite, for comparison with the sepulchral. It is clear, however, that those found with burnt bones in them, were, in the first instance, vessels of domestic use.



Stone Vessel dug up in Unst,
Shetland.
(17 inches long.)

In the Sagas we have historical evidence of the use of stone pots for culinary purposes in the Viking time. In the account given of the battle of Stiklestad (A.D. 1030), in the Saga of King Olaf the Holy, we are told of one of the warriors who was hit by an arrow, that he was brought to a nurse-girl to be tended, and her *modus operandi* is thus described:—"Now she had stirred together leeks and other herbs and boiled them in a *stone-pot*, and of these she gave to the wounded man to eat. By this she discovered if the wound had penetrated into the cavity of the belly; for if the wound had gone so deep, then it would smell of

¹ See the "Archæologia Scotica," vol. v. p. 158.

leek"—a rough, but, on the whole, a rather useful diagnosis in those days of rough and ready treatment.

From an examination of the circumstances in which these stone urns are found in the Viking grave-mounds of Norway, and the relics with which they are usually associated, I come to the conclusion that the steatite pots and urns found in Scotland (which, be it observed, are confined in that country to the area occupied by the Northmen), are probably of the Viking time; and they are interesting to us as suggestive of the existence of cremation in one portion of Scotland so late as between the close of the eighth and the beginning of the eleventh centuries. When I was in Orkney last summer, I saw, in Mr Petrie's collection, a fragment of one of these urns which I could have no hesitation in regarding as Norse, for it had still the remains of the iron *lug* which held the bow of the pot riveted through the stone.

In the grave-mounds of Norway these steatite pots are found associated with the group of objects which marks the Norse occupation of the north of Scotland, the peculiarly-shaped sword, tortoise brooches, bone dice of a peculiar form, cut from the middle of a sheep-shank bone, and long round-backed combs—all articles which only began to be brought over to this country by the Vikings in the end of the eighth century.

II. TORTOISE OR BOWL-SHAPED BROOCHES.—This strikingly peculiar class of relics has a special interest as illustrative of the style of that purely Pagan art, which flourished in Scandinavia even after the rest of Europe had been leavened with the refining influences of Christianity.

The following specimens have been found in Scotland:—

1. The fine brooch here figured is one of a pair found at Castletown, Caithness, in 1786. It is noticed in the list of donations to the Museum for the year 1787, printed in the Appendix to the "*Archæologia Scotica*," vol. iii. p. 61, as one of several articles presented by James Traill, Esq., among which were:—

"Two oval brooches of copper gilt, embossed and decorated with rich carvings, each surrounded with a double row of silver cord near the edge, with an iron tongue on the hollow side, much corroded; the length of each brooch, 4½

inches, the breadth 3 inches. These were, in September last (1786), dug out of the top of the ruins of a Pictish house in Caithness, lying beside a skeleton, buried under a flat stone with very little earth above it."

One of this pair of brooches was given to Mr Worsaae, on his visit to Scotland, along with other Scottish specimens, in exchange for representative specimens of Danish antiquities; and I had no difficulty in recognising it in one of the cases of the Museum at Copenhagen.

The notice of the interment with which these brooches had been deposited states that it had been made on the top of one of the mounds covering the ruins of a Pictish broch. This is what we should expect of



Tortoise or Bowl-shaped Brooch, found with a Skeleton at Castletown, Caithness.

a Norwegian burial of the period when a "how" or mound was always selected or made for the interment.

The specimen here figured belongs to a class of these oval brooches common in Norway, and still more frequent in Scania in Sweden. The pattern is nearly always the same, though with slight variations in the details. The centre of the brooch is occupied by a bold ornament resembling a crown, and the four ornamental bosses below it are shaped like horses' heads. The body of the brooch is double, the lower shell being highly gilt, and the pierced upper part has been ornamented with silver chains laid in the

channels dividing the ornament into compartments, as is still seen in the case of the Tires brooch, to be subsequently noticed. The "double row of silver cord near the edge," mentioned in the description of the brooch in 1787, no longer exists.¹ In this case the brooches were associated with an unburnt burial.

2. Another pair of these oval brooches from Caithness were found in a short cist on the top of a mound of gravel, called the Longhills, a little below the Broch of Kettleburn, near Wick, in 1840. Though in a very fragile condition, they have been carefully preserved by James Henderson, Esq. of Bilbster, on whose farm of Westerseat they were found, and by whom they were exhibited at the Archæological Exhibitions at Edinburgh in 1856 and at Aberdeen in 1859. In consequence of my inquiries after them, through Mr John Cleghorn of Wick, Mr Henderson has generously presented them to the National Museum of the Society, in order to secure their permanent preservation as part of the series of relics



Tortoise or Bowl-shaped Brooch, found in a cist in the Longhills, Wick.

illustrative of this interesting period. They are both formed of double plates, the upper being secured to the lower by small rivets, and the twisted chains of fine silver wire which filled the channelled depressions

¹ Worsaae figures, in his "Nordiske Oldsager" (1859), fig. 423, a brooch of this oval form with a twisted silver cord round the edge.

in the pattern of the upper shell are still visible in some places. The brooches are different in pattern. One is similar to the Tiree brooch figured on p. 560. The other, which is here figured, differs from all the Scottish specimens in having eight bosses of open work arranged round the central boss.

3. A single brooch of the oval bowl-shaped form found in a grave on the Links of Pierowall, Westray, and presented to the Museum in June 1851 by Mr William Rendall. It is thus referred to in the Donation List: "A bronze oval brooch, ring-brooch, and various iron relics, including a hatchet, spear-head, and portion of the umbo of a shield,—all found in one of a remarkable group of graves on the Links of Pierowall, Westray, Orkney; also a male human skull from the same grave."



Bronze Bowl-shaped or Tortoise Brooch found in a grave at Pierowall, Westray.

The interesting group of interments from which this brooch came, consisted of several graves surrounding a tumulus situated at some distance from the sea, near the head of Pierowall Bay.

(1.) In one grave, in a cist formed of large stones, there was found the skeleton of a man lying on the left side, with the head to the north, the knees drawn up to the chest and the arms crossed on the breast. At the head was an iron shield-boss; on the left side an iron sword, nearly 4 feet in length. A whetstone, a comb, and some glass beads were found in the cist.

(2.) In another grave of the same group there was the skeleton of a woman, with the head to the south. On the breast lay a pair of oval shell or bowl-

shaped brooches, and between them, but lower down, one of the trefoil or clover-blade-shaped ornaments which so commonly accompany these brooches in Norwegian graves of the Viking time.

(3.) In a third grave of this group another pair of oval bowl-shaped brooches were found, and also two long combs with semi-circular backs, one of which lay above each shoulder. These brooches and combs passed into the possession of Mr Crofton Croker, and were subsequently acquired by Mr Bateman, in whose museum, at Lomerdale House, Derbyshire, they are still preserved.

(4.) A fourth grave of this group contained, with the skeleton, a pair of oval brooches, a bodkin, and a pair of long combs, one of which is here figured.



Comb found, with two Oval Brooches, in a grave in Westray.

It is uncertain to which of these interments the brooch in the Society's Museum belongs, or whether it belongs to any of them. It may have been found in a subsequent excavation, of which we have no record. It is, however, very much of the same style as the one figured by Mr Bateman,¹ and is formed of a single plate, as all the three pairs found in Orkney appear to have been. They are poorer in design and more coarsely finished than those found in Caithness and the Western Isles, and this seems to suggest that they may have been manufactured in Orkney, while the others may have been brought from Norway. Similar brooches of a single plate, however, are not unfrequently found in Scandinavia, and one of the same pattern as this Orkney one, dug up at Sundal, Nordmore, Norway, is figured in the set of photographs of the Christiania collection presented to our Library by his Majesty the late King of Sweden, who was an Honorary Fellow of this Society.

¹ Mr Bateman's figure is reproduced in Dr Wilson's "Prehistoric Annals," vol. ii. p. 305.

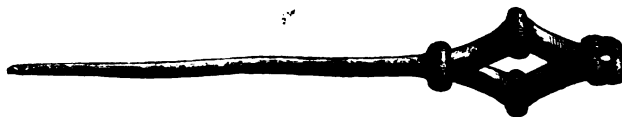
4. A pair of these brooches were found in a grave near Dunrobin, in Sutherlandshire. The under shells of them are now in the Duke of Sutherland's museum at Dunrobin Castle.

5. A brooch found at Ospisdale, in Sutherlandshire, is in the possession of Mrs Gilchrist, Ospisdale House.



Bronze Bowl-shaped or Tortoise Brooch found in Islay.

6. A pair were found in the island of Islay, and presented to the Society's Museum, in May 1788, by Colin Campbell, Esq. of Ballinelly. They are thus noticed in the Donation List:—"Two ancient oval brooches of brass, embossed and decorated with rich carvings; the length of each brooch $4\frac{1}{4}$ inches, the breadth $2\frac{1}{8}$ inches, and the height, $1\frac{1}{4}$ inch."



Bronze Pin from Tiree.

7. One of a pair found in the island of Tiree was presented to the Museum, in June 1872, by the late Rev. Dr Norman Macleod. Nothing further is known concerning the circumstances of their discovery than

that they were found in a grave along with the peculiarly-shaped and massive bronze pin here figured. (See also p. 560.)

It is noticed in the "Old Statistical Account of Tiree" that, in digging at Cornaigbeg, there were found, at different times, human skeletons, and nigh them the skeletons of horses. Swords were found diminished with rust; silver work preserved the handles; there were also shields and helmets, with a brass spear.

This brooch measures $4\frac{1}{2}$ inches in length, $2\frac{3}{4}$ inches in breadth, and $1\frac{1}{2}$ inch in height. It is double, the under part having a flat rim with a band of lacertine ornamentation in panels. The plain portion of the under shell has been gilt. The upper shell has a raised boss in the centre, pierced with four openings. Two similar bosses are placed at the extremities of the longer and shorter diameters of the oval, and half way between each pair of these bosses there are spaces for beads or studs, four in number, which have been fastened on by rivets of brass, one of which still remains *in situ*. From the central boss to the other bosses there are channelled depressions in the metal, in which are laid three rows of a small silver chain, formed of two strands of a very fine wire twisted together, and forming a double diamond figure on the oval surface of the brooch.

On 15th March 1847, a notice of a similar brooch, found in Tiree, was read to the Society and the brooch exhibited by Sir John Graham Dalzell. It is described as "resembling, to minuteness, several in the Museum," and, as these brooches usually occur in pairs, it was probably found with the one presented by Rev. Dr Macleod.

8. A pair were found by Commander Edge in a grave-mound in the island of Barra. The mound had a *bauta-stein*, 7 feet high, standing on the top of it. The skeleton lay with the head to the west, and along with it was an iron sword, with remains of the scabbard, a shield-boss, and remains of the shield, a whetstone, the two brooches, and a comb 8 inches long.

9. A single brooch, one of a pair, closely resembling those from Pierowall, is figured in the "Vetusta Monumenta," vol. ii. pl. xx.:—"It was found, together with a brass pin and a brass needle, one on each side of a skeleton, in the isle of Sangay, between the isles of Uist and Harris." It is stated that "the fellow of it is in the British Museum."

10. A pair, found in St Kilda, are preserved in the Andersonian

Museum, Glasgow. One of these is figured in a paper by Mr J. J. A. Worsaae, entitled "Nordeuropas Tidligste Bebyggelse og Kulturudvikling" in the "Aarbøger for Nordisk Oldkyndighed" for 1873.

11. Two oval bowl-shaped brooches, now in the museum at Lerwick, were found at Clibberswick, in the north end of the island of Unst, Shetland, along with a trefoil brooch, ornamented with dragons, whose feet twist under and grasp parts of their bodies. The trefoil brooch closely resembles one found in Denmark, and figured in the "Memoires de la Société Royale des Antiquaires du Nord" for 1840-44. Along with them were found a plain silver bracelet and two glass beads, ornamented with twisted streaks of white and blue. This pair of tortoise brooches had the usual mark of cloth on the inside of the inner shells. A notice of them by James T. Irvine, F.S.A. Scot., is given in the "Journal of the Archæological Association," vol. xix. p. 313.

Martin probably mentions another pair in the following notice:—"There was lately discovered a grave in the west end of the island of Ensay (between Barra and Harris) in which was found a pair of scales made of brass and a little hammer,"—probably a "Thor's hammer."—*Western Islands*, ed. 1716, p. 50.

Thus we have notices of the occurrence of fourteen pairs of these brooches in Scotland, viz., one pair in Shetland, three in Orkney, two in Caithness, two in Sutherland, and six in the Western Isles,—twenty-six specimens in all, of which only eight have found their way to the Museum.

We have in the Museum, however, one specimen from Norway, dug up from a grave in Haukadal near Christiania, one from Denmark, and one from England. The English specimen is one of a pair found on the breast of a skeleton which was discovered near Bedale, Northallerton, Yorkshire, some years before 1848. The other brooch of the pair is engraved in the "Archæological Journal" for November 1848 (vol. v. p. 221). It is there described as having been found only one or two feet below the surface, with a skeleton, the breast of which had been transfixed by a long spear-head. No other remains were found with it.

In Norway these tortoise brooches are associated with the urns of steatite formerly mentioned, and with burial by cremation, as well as with unburnt burials. It may be interesting to cite a few examples of

their occurrence in connection with cremation as illustrative of the prevalence of this mode of burial to the comparatively late period which is characterised by this peculiar form of brooch:—

(1.) A pair of oval bowl-shaped brooches, and a clover-blade-formed brooch, and two bronze bracteates, were found in 1870, in a long grave-mound in Tornbek Gaard, along with the fragments of a steatite pot or urn of the usual form. The oval brooches were double-shelled, having a large knob in the centre, and around it four others in the shape of animals' heads. The brooches seem to have been in the fire. (*Foreningen for Norske Mindeemaerker's Bevaring*, 1870, p. 80.)

(2.) An oval bowl-shaped brooch of bronze, double-shelled, was found, with some small articles of iron and burnt bones, in a small round grave-mound in Romsdal parish, Hedenmarken. (*Foren. for Norske Mindes. Bev.*, 1873, p. 69.)

(3.) An urn or pot of steatite of the usual form of the later Iron Age, which had been clamped with iron, and an oval bowl-shaped brooch double-shelled, were found in a round grave-mound at Bringsvaa in Nedenes, with the bones of a horse. In the stone pot were burnt bones and a dozen round brass knobs like buttons. (*Foren. for Norske Mindes. Bev.*, 1873, p. 73.)

(4.) In case 96 in the Museum at Stockholm, there are six oval bowl-shaped or tortoise brooches, each of a single plate, and one pair of double-plated brooches, which were found in 1866 along with fragments of clay urns and burnt bones, and among them two spear-heads of iron and some glass beads, in a grave-mound at As-Husby in Uppland, Sweden.

(5.) In case 100 in the same Museum, there is a pair of these oval brooches, a trefoil brooch, and three spear-heads of iron, which were found, in 1855, among ashes, charcoal, and burnt bones, in a grave-mound at Tanno, near Jonkoping, Sweden.

These instances are sufficient to show the association of the oval brooches with the custom of cremation, though they are much more frequently found with unburnt burials.

The brooches themselves have, moreover, a technical interest to the student, on account of the story they have to tell of the ancient processes of manufacture.

And first as to the material. We have no analyses of the Scottish specimens, but in Scandinavia it has been found that the metal of which they are composed is not bronze but brass. It is characteristic of the

relics of the earlier bronze period, that the alloy of which they are composed is one in which copper and tin are the principal ingredients. It is characteristic of the Iron Age, that much of the bronze-like metal that was then used so abundantly for decorative purposes, is not the older alloy of copper and tin, but a new alloy in which copper and zinc form the principal ingredients. It is, in fact, not bronze but brass, though differing considerably in the proportions of its constituent elements from the brass of more modern times.

This change in the composition of the metal from tin-bronze to zinc-bronze, is a useful distinction to be noted in considering the age of relics which are of bronze-like metal. "Zinc," says Morlot, "is never present in the bronzes of the Bronze Age, even as an impurity." The researches of Göbel have also shown that zinc is absent even from the Greek bronzes, which are composed of copper, tin, and lead. Zinc only begins to appear as an ingredient in Roman alloys, and it is only towards the commencement of the Christian era that it begins to be present in them.¹ The commencement of the Iron Age in Central Europe is pretty well defined by the occurrence of leaf-shaped swords of iron with flat handle-plates, which are actual copies in the new metal of the older form of bronze sword—a form quite unsuited to the malleable material, though excellently adapted to be cast in bronze. These have been found associated with relics dated approximately as of the third century before the Christian era. It is only after the commencement of the Iron Age that we meet with zinc bronzes, so that the presence of this ingredient in the metal is proof that the object belongs to the Iron Age and not to the age of bronze, even though it may be a form which otherwise would have been assigned to the bronze age. For instance, there is in the Museum at Stockholm, a leaf-shaped bronze sword, found in 1868 at Qvie, in Gotland. It was found in a stone cist 2 feet (Swedish) square, among burnt bones. Along with it an iron axe was found, showing it to be a bronze sword of the Iron Age. But if the iron axe had completely disappeared through oxidation, the composition of the metal of this *bronze*

¹ See Morlot's observations in a paper entitled "Les Metaux employes dans l'age du Bronze," in the *Memoires de la Societe des Antiquaires du Nord* for 1866, p. 29.

See also a series of analyses of ancient bronzes in Kruse's "Necro-Livonia."

sword would have conclusively established its period as that of the Iron and not of the Bronze Age.¹ Its analysis gave—

Copper,	85.45
Zinc,	12.00
Tin,	1.59

The metal of which these brooches were made seems to have been always an alloy of very variable composition, often containing a good deal of lead, if we are to judge from the effects of age and oxidation, but in the absence of analyses it is impossible to speak with certainty on this subject.

Let us now examine how these brooches were made. It will be observed that they are formed in two separate pieces, which fit like one inverted bowl placed over the bottom of another. The upper shell is pierced with open work, the under one unpierced but richly gilt, the intention being that the gilding should show through the openings. These upper shells appear to have been cast in moulds of hardened clay. The inside of the under shell, however, presents an appearance of peculiar interest. In most of them it is very distinctly marked with the impression of coarse linen cloth. Close examination reveals that it really is an impression in the metal, and not the result of corrosion in contact with cloth. That also may be seen on some of them, but its appearance is different. I was long puzzled to account for this peculiar appearance of the inside surface of these brooches, and the explanation suggested by some of the Scandinavian archaeologists, to whom I mentioned my difficulty, viz., that they were cast on pads of cloth, did not remove it. But when I mentioned the matter to Mr John Evans, he suggested an explanation, which seems to me to be in most cases, probably, the true one. These under shells were cast in *stone*-moulds, prepared in this way:—the side of the mould corresponding to the convex surface with its ornamental border, was cut in soft stone. A thickness of wet cloth was then fitted into it corresponding to the thickness of the metal, and over this a lump

¹ Similarly a plate of unmanufactured bronze-like metal which was found in the Broch of Carnliath, Dunrobin, along with a number of relics of the later Iron Age, was found, on its analysis by Dr Stevenson Macadam, to be composed of—copper, 82.25; zinc, 15.84; tin, 1.46; lead, 0.21.

of tough clay was rammed hard, and left to harden sufficiently. The clay cover was then lifted and the cloth removed, thus leaving a cavity for the metal. The clay became one side of the mould and the stone the other, and when the metal was run in it took the impression of the cloth retained



Fig. 1.



Fig. 2.

Tortoise Brooch found in Tiree.

1. Under Shell of Brooch, Gilt.
2. Upper Shell, of Pierced and Chased Work.

upon the backing of clay. Sometimes, however, as in the case of the single plate brooch from Pierowall, Orkney, it is evident that the ornamental side of the brooch is cast from a clay impression made by a pattern cut in wood. It becomes apparent on examining the details of the ornament that they have been cut with a knife, or graver, which has run less smoothly wherever it has turned to cross the grain of the wood. The

marks where it has slipped, are sometimes even discernible. But whether the matrix in which the metal was cast may have been hardened clay or stone, the process was the same, and the inner side of the mould was formed in soft clay rammed over the necessary thickness of cloth. Thus we are presented with castings in metal of the textile fabrics of the eighth and ninth centuries, showing the thickness of its threads, the method of weaving, and the general finish of the fabric. That is as regards the cloth used in the preparation of the moulds in which these brooches were made.

But there is a still more singularly interesting circumstance connected with these brooches and the cloth of the period when they were made and worn. In some instances they have not only preserved its impression in the metal, but have actually preserved small portions of the dress in which they were worn, or, at least, in which they were fixed when they were committed to the tomb with the body of the wearer. It is a peculiarity of these brooches that they have all had large thick pins of iron, hinged at the one end, the point fitting into a hooked iron plate or catch projecting from the under surface of the brooch, now usually enveloped in a lump of oxidation. In this one from Tiree, and the one I brought from Haukadal near Christiania, I have ascertained by a careful examination of this lump of oxidation, that it has inclosed and protected from decay a minute portion of puckered cloth which had been caught in between the point of the thick pin and the catch when the brooch was last fastened on the dress. I have been able to remove and mount for microscopical examination some small scraps of this cloth. So far as I can judge of its appearance under the microscope, it seems to be linen cloth, with a partial admixture of another fibre which I take to be hemp, and I can detect no material difference between the cloth in the specimen from Norway and that from the island of Tiree on our own western coast. These, then, are actual specimens of the linen manufacture of the Viking time.

Let us now look at the range and distribution of these brooches. As they mark the Viking period they also indicate the range of territory frequented or conquered by the Northmen. In the Museum at Stockholm I saw about 400 of them, in Christiania about half that number, and a large collection in Copenhagen. They are found with the charac-

teristic Viking remains in Livonia, where the Northmen established a Russian kingdom; in Normandy, which they made their own; in Iceland, associated with Cufic coins of the tenth century; in Ireland with characteristic swords of the Viking time, as at Larne, Kilmainham, and Island Bridge, and in the Phoenix Park of Dublin; in England, in Yorkshire and Lancashire; and in Scotland, in Orkney, Caithness, Sutherland, the Hebrides, and even in remote St Kilda.

Then as to their associations. In Norway and Sweden they are found both with burnt and with unburnt bodies. An Arab writer states that they were worn on the breasts of females, and their being found in this country in some instances along with combs, needles, and spindle whorls, seems to prove the Arab right. In other cases, however, they are found with swords, shield-bosses, and armour of men. This may suggest either that they were worn by men as well as by women, or that in these instances a woman was slain and buried along with the man, either by the chances of war, or in accordance with the horrible rites of immolation described by Ibn Fozlan¹ as practised among the Northmen so late as in the tenth century.

III. CHARACTERISTIC WEAPONS OF THE VIKING PERIOD.—The interments in Orkney, in which the warrior, though unburned, is accompanied in the grave-mound by the bones of his horse and his dog, and by the remains of his iron-mounted shield, his iron axe, and his long iron sword, are all of the heathen Viking time. A number of examples, chiefly

¹ See the narrative of Ibn Fozlan in the Proceedings, vol. ix. p. 520. The practice of cremation existed in these northern regions long after Ibn Fozlan's time. Gruber, in his "*Origines Livoniæ*," states that, in 1225, the Esthonians, whose heathen customs were akin to those described by Ibn Fozlan, relapsed into paganism after a brief nominal conversion to Christianity, took back the wives they had given up, exhumed the dead who had been buried in Christian cemeteries "*et more paganorum pristino cremaverunt*," and burned them after the fashion of the old pagan times. In Dreger's "*Codex Diplomaticus Pomeraniæ*," there is a deed of contract dated A.D. 1249, between the converts and the brethren of the Holy Cross of Livonia, in which the converts come under obligation "*quod ipsi et heredes eorum in mortuis comburendis vel subterrands cum equis sive hominibus, vel cum armis, seu vestibus, vel quibuscunque aliis preciosis rebus, vel etiam in aliis quibuscunque, ritus gentilium de cetero non servabunt, sed mortuos suos juxta morem Christianorum in cimiteriis sepelient et non extra.*"

from the island of Westray, in Orkney, will be seen in the case devoted to finds from these graves in the Museum.

Swords.—A large number of these interesting weapons have been found from time to time in the northern and western parts of Scotland, but such "rusty bits of old iron" had no charms for antiquaries of the old school. The Rev. Mr Pope records a remarkable find of Scandinavian weapons at Haimar, near Thurso, in Caithness, and remarks of the swords, that "they were odd machines of rusty iron resembling ploughshares." We have specimens in the Museum of both forms of the Scandinavian sword of the Viking time; the earlier with larger blade, short, square guard, and massive square or triangular pommel; and the later with lighter blade, recurved guard, and trilobed pommel. The following details of the occurrence of Norse swords in Scotland, meagre as they are, will show how very rarely these fine weapons have been properly cared for even when they have been found:—

1. The finest specimen of the Viking sword that has been preserved is one which was recently presented to the Museum by the representatives of the late Professor Thomas S. Traill, through Rev. G. R. Omond, F.C. minister of Monzie, a Fellow of this Society. This sword was only known to me by a drawing of it which is preserved among the collection of drawings in the Society's Library, and which had been made apparently with a view to its publication in the Society's Proceedings, although never engraved. I find from the minutes of the Society's meetings, that in May 1834 this sword was exhibited at one of the Society's ordinary meetings by Professor Traill, and it is most likely that it was on this occasion that the drawing was made. Through the good offices of Rev. Mr Omond, the sword itself, which was not in the collection previously presented by the representatives of the late Professor Traill,¹ is now added to the Society's collection, and I am enabled to add the accompanying representation of it, along with a figure of a similar sword of the Viking time, ploughed up near a grave-mound at Vik in Flaa Sogn, Norway, in 1837, and figured in the series of photographs of the Christiania Museum.

From a note-book of Professor Traill's, which contains a drawing of the sword, with a short note of the circumstances of its discovery, it appears

¹ See the Proceedings, vol. viii. p. 389.

that it was turned up by the plough in the year 1826, at Sweindrow, in Rousay, "near the spot where the unfortunate Earl Paul Hakonson, of Orkney, was seized by the famous Orkney Viking, Swein Asleifson, and carried off by him to Athol." "On this field," says Professor Traill's note, "there are many graves, in one of which the fragments of an iron helmet were found several years ago." In a letter addressed to Professor Traill by William Traill, Esq. of Woodwick, of date October 17, 1836, he refers to the satisfaction which he had felt in the anticipated visit of Professor Traill to Orkney, with the view of opening some of the tumuli at Sweindrow, and adds, "the place where the sword was found I have not yet touched, as I intend to reserve it for your appearance. The



Fig. 1.



Fig. 2.

Viking Swords.

1. Sword ploughed up at Sweindrow, Rousay, Orkney.
2. Sword ploughed up at Vik, Norway.

sword cannot be better than in your possession, and I now send some remains of what appears to me to be a helmet found in the immediate vicinity, to keep the sword company." The supposed "helmet" is referred to in the minute of the meeting in 1834, at which the sword was exhibited as "the boss of a baldric" which was found near the sword. It is now in the Museum, having been one of the articles in the collection of the late Professor Traill, presented by his representatives in 1870. It is in many fragments, but is easily recognisable as the iron boss of a

shield of the Viking period, and precisely similar to other two shield-bosses in the Museum, which are also from Viking graves in Orkney.

From Professor Traill's notebook I have copied the following notes and measurements, made when the sword was more perfect than it is now :—

	Feet.	Inches.
Extreme length of the sword,	3	3 $\frac{1}{4}$
Length of the blade,	2	8
Breadth of the blade 1 inch from the point,	0	1
Do. at 6 inches from the point,	0	1 $\frac{1}{2}$
Do. at 13 inches from the point,	0	2
Do. at 22 inches from the point,	0	2 $\frac{1}{2}$
Length of the cross-guard,	0	5
Depth of the cross-guard,	0	1 $\frac{1}{4}$
Length of grip,	0	3 $\frac{1}{4}$
Width of pommel,	0	4 $\frac{1}{4}$
Height of pommel,	0	3

"The blade has been two-edged. There are remains of a wooden scabbard adhering to it, and the hilt has been of bone or horn, ornamented with a metal which appears to be an alloy of copper and silver. The sword was broken by the plough into four pieces.

"The boss of the baldric? (shield-boss) is 4 inches in diameter, 2 $\frac{1}{2}$ inches deep, and 7 $\frac{1}{2}$ inches over its centre."

The sword is now in many pieces, but the hilt is still in good preservation. It shows the massive triangular pommel and straight cross-piece with convex sides, characteristic of these Viking weapons. The blade is double-edged, tapering, and obtusely pointed. It has been in the scabbard at the time of its deposit, and blade and scabbard are now converted into a mass of oxidation. The scabbard has been made of thin laths of wood, covered with some substance, probably leather. There are now but slight remains of the plates of bone or horn which covered the grip of the handle; but the metallic mounting,¹ which adorned both ends of the grip, still remains. It looks like brass gilt; but it is so much

¹ A similar mounting remains on the grip of one of the Norse swords (of the same form as this one), dug up at Island-bridge near Dublin, and preserved in the Museum of the Royal Irish Academy, Dublin. See "Wakeman's Handbook of Irish Antiquities," p. 167, for a figure of it.

altered by oxidation that it is difficult to determine the character of the metal. The form of the ornament is a series of animals' heads, having some resemblance to the dog or fox, and is suggestive of the heads adorning the fine silver brooches subsequently to be referred to.

Barry describes the place where these remains were found, as follows:—

"A plain on the shore, about a quarter of a mile to the west of Westness (in Rousay), has on it immense piles of stones, evidently the ruins of some ancient structures, around which are to be seen graves formed with stones set on edge, as in some other places; and the name of Sweindrow, which it bears, points it out, with great probability, as the scene of the capture of Earl Paul, by Swein, the son of Asleif, and the slaughter of his attendants."¹

The exploit of Swein Asleifson here alluded to,² as detailed in the "Orkneyinga Saga," was the seizure of Earl Paul, in 1136, as he was otter-hunting with his men on a heap of stones beneath a headland at one end of the Island of Rousay. The "Saga" says, that Swein's party killed nineteen men and lost six. Professor Traill thought that this sword might probably have belonged to some of those who fell in that conflict, and possibly to Earl Paul himself. All that we can say of it with certainty, however, is that it is a sword of the Viking period, and that, judging from its form, it may be one or even two centuries earlier than Earl Paul's time.

2. There is in the Museum another fragment of a sword of similar form, with short square guard and square-shaped pommel, also from Orkney. It was found along with a spear-head, much corroded, in a grave in the island of Westray, and presented to the Museum in 1863, by Colonel Balfour of Balfour and Trenabie, F.S.A., Scot.

3. I have received from Dr Arthur Mitchell a note and pencil sketch of another sword of this form, but with a more rounded pommel, which was in the possession of Walter Denison, Esq., Brough, Sanday. The blade (which is broken) is 25 inches long and 2½ wide, and double-edged, the guard being 4 inches long, and of the usual straight form with square ends. A note attached to the sketch says, "This sword was found in a tumulus at Sties."

¹ Barry's "History of Orkney," Kirkwall edition, 1867, p. 64.

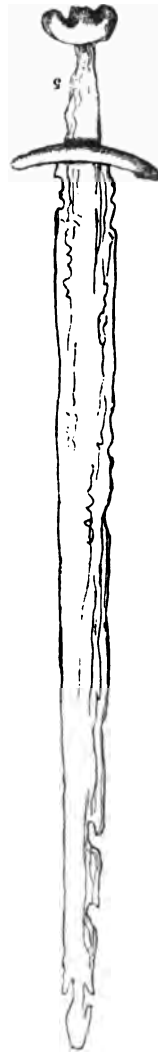
² "The Orkneyinga Saga," Edinburgh, 1873, p. 105.

4. Pennant, in the second volume of his "Tour," plate xlv., figures an iron sword of this type, with short square guard and pommel of the same form. The only reference to it in the work seems to be in the descriptions of the plates, where it is noticed as "part of a rude iron sword found in Islay."

5. Of the later form of sword of the Viking time, with curved guard and trilobed pommel, we have a fine example in the one here figured, which was found in making a cutting on the Strathspey Railway, at Gorton in Morayshire, and was presented to the Museum in February 1864 as Treasure Trove. This sword is 35 inches in length, of excellent workmanship, damascened along the centre of the blade, while the pommel and recurved guard are beautifully inlaid with silver. The blade is fully $2\frac{1}{2}$ inches in breadth, and the grip is $3\frac{1}{4}$ inches long. The recurved guard, which is 5 inches in length, and 1 inch wide, having a thickness of $\frac{3}{8}$ inch, is now loose, having an opening in the centre through which the tang of the sword-blade passes. The pommel is trilobed, the middle knob being imperfect. An enlarged figure of the hilt of this sword is given on the next page, showing the inlaid ornamentation. Swords with recurved guards, similarly inlaid with silver, are frequently found in the grave-mounds of Norway of the later Iron Age.¹

6. A fragment of a sword consisting of the hilt and part of the blade dug up in 1824, from a depth of six or seven feet in gravel, in the village of Ballaugh, Isle of Man, and presented to the Museum by Mr J. R.

¹ Examples of these are engraved in the "Foreningen for Norske Fortidsmindesmaerkers Bevaring, Aarsberetning" for 1868, Plate vi. fig. 35; and "Aarsberetning" for 1869, Plate v. fig. 26.



Sword found at Gorton, Morayshire.

Oswald, in September 1824. From a paper communicated to the Society by Mr Oswald at that date, and preserved in the Society's MS. Communications, it appears that the sword and a spear-head (which seems to be no longer in existence) were found together in a small gravelly mound. They lay parallel to each other, and the gravel for some distance round them was marked by a dark discoloration. The spear-head had remains of the wooden shaft in the socket, and Mr Oswald remarks, that "there



Hilt of Gorton Sword. Enlarged to show ornamentation.

are also some appearances of oak on the handle of the sword, as well as some remains on the blade, that would indicate it to have been sheathed in a scabbard of yew." The progress of the oxidation which so often destroys such relics, has thoroughly removed these interesting traces of the grip and scabbard from the sword, and it is now merely a thin film of iron, retaining, however, the form of the blade and handle. The length of the grip is $3\frac{1}{4}$ inches, the length of the remaining portion of the blade 8 inches. It is double-edged, and 2 inches wide. The guard is recurved, 1 inch wide, $3\frac{1}{2}$ inches long, and $\frac{3}{8}$ inch thick. It has an oval opening in the centre through which the blade is passed. The pommel is of the same form as the guard, but wants the terminal ornament, which seems to have fallen off.

7. A portion of the hilt end of a sword similar to the last,¹ which was

¹ A sword precisely similar to the two last described was found in the bank of the Tweed at Norham, and is figured in the "Archæological Journal," vol. xxiv. p. 80. It is there assigned "with much probability to the thirteenth century, or even, as some have supposed, to an earlier period." The sword represented on the coins called Peter's Pennies, which were struck at York during the rule of the Scandinavian kings in Northumbria, is of this form.

dug up in the churchyard of St Maughold, Isle of Man, and presented to the Museum in September 1824, by Mr J. R. Oswald. "This sword," says Mr Oswald, writing in 1824, "was dug up in the churchyard of St Maughold, many years ago, and re-discovered in a manner rather singular, and which it is necessary to relate as an evidence of the relic being genuine. About eight years ago, I heard that such a sword had been found, and after a good deal of inquiry, learned that it was supposed to have been thrown with other rubbish, soon after its disinterment, beneath the seat of the clerk's desk (in the church). Having got admission into the church, I directed the clerk to the place, and he to his great astonishment, discovered it without difficulty."

Besides these, which may be all taken as undoubtedly Scandinavian, we have in the Society's collection of drawings, water-colour sketches of an iron sword, with short straight guard and pommel of similar form, a shield-boss of iron of semi-globular form, and a spear-head of iron, which are preserved at Rossdhu Castle. These sketches were made by a Fellow of this Society, Hope J. Stewart, Esq., and exhibited in illustration of an interesting communication which he made to the Society in February 1853.¹ The relics in question were found in April 1851, in the top of a mound called Boiden, near the Lower Bridge of Froom. They were about 2 feet below the surface, and lay altogether within a space of about $2\frac{1}{2}$ feet square. The sword, which is greatly bent, is 35 inches in length, the blade 2 inches in width and double-edged, the bar at the end of the hilt is nearly equal in size to the guard, and in general character it much resembles the Westray sword in the Museum. The spear-head is 11 inches in length, and 2 inches broad. The shield-boss, which had a broad flat rim, is $6\frac{1}{2}$ inches in diameter and 2 inches deep.

In the MS. Communications to the Society, there is an account of the discovery of a grave at Ballindalloch in Morayshire, in 1829, containing a number of iron relics, which seem also to be of this period. The grave contained a human skeleton along with the skull and bones of a horse, and in it were a quantity of rings and bits of iron, one of them a great hoop—in all probability the iron rim of the shield. Mr Stewart obtained the bridle-bit, which consisted of two bronze (brass?) rings joined by a double-link of iron, and he gives a sketch of what he calls "a curious little iron

¹ Printed in the Proceedings, vol. i. p. 142.

cup found in the grave," which will be at once recognised as the boss of a shield.¹

If these last-mentioned relics are Scottish, I know no others like them. They are so similar to the weapons from Viking graves in Orkney and



Compartment of Legionary Tablet found at Bridgeness.

in Ireland, that I would have felt no hesitation in assigning them to the Viking period, if it had not seemed possible that they may have belonged to the Early instead of the Later Iron Age. It is suggestive of this, that on the sculptured legionary tablet found at Bridgeness, and now in the Museum, the square shields of the Caledonians are represented with bosses, which (allowing for the deficiencies of the sculpture) seem to be not unlike the Rossdhu example, while the sword hilt on the sculpture is of the same form as that delineated by Mr Hope Stewart.

Shield-bosses.—We have in the Museum fragments of three shield-bosses, of semi-circular form, and one entire one, found in different parts of Orkney.

No. 1 is the shield-boss found in the cist at Pierowall, Westray, with the tortoise brooch previously described, and the spear-head and axe-head to be subsequently noticed, and presented to the Museum in 1851 by Mr William Rendall. It consists of two fragments forming rather more than the half of the boss, which has been $5\frac{1}{2}$ inches in diameter and $2\frac{1}{2}$ inches high in the centre, having a flat rim $\frac{1}{4}$ inch in breadth, with small rivet-holes for fastening it to the shield.



Shield-boss of Iron, found in a Cist at Pierowall, $5\frac{1}{2}$ inches diameter.

¹ Dr Daniel Wilson, describing this find, suggests that it may represent the tomb of a "Charioteer," the form of the shield-boss, he thinks, suggesting for it an Anglo-

No: 2 is of the same form, and seems to have been of about the same size, as No. 1. It was found at Sweindrow, in Rousay, Orkney, with the sword figured at p. 563, and presented to the Museum in the collection of the late Professor Traill. It is now in many fragments.

No. 3 is a smaller shield-boss, more conical in shape, and is entire, but somewhat unshapely, from the masses of oxidised incrustation attached to it. It measures $3\frac{3}{4}$ inches in diameter, and 3 inches high. This shield-boss also formed part of Professor Traill's collection, and a note in his handwriting inserted in it informs us that it was found in a "how" in Orkney.

Spear-heads.—Iron spear-heads are rare with us, and we have only four in the Museum that may be considered of this period.

1. A spear-head found in a cist at Pierowall, Westray, Orkney, with the oval bowl-shaped brooch formerly described, an axe-head, and the shield-boss above figured, and presented to the Museum by Mr William Rendall in 1851. It is much decayed, the socket part being almost entirely gone, and the blade much corroded and split. It measures 8 inches in length and $1\frac{1}{4}$ inch in greatest breadth, but has been considerably larger.

2. A spear-head found in Westray, with the sword previously mentioned, and presented to the Museum by Colonel Balfour. It is 10 inches long and $1\frac{1}{4}$ inch wide in the widest part of the blade, but is broken and corroded.

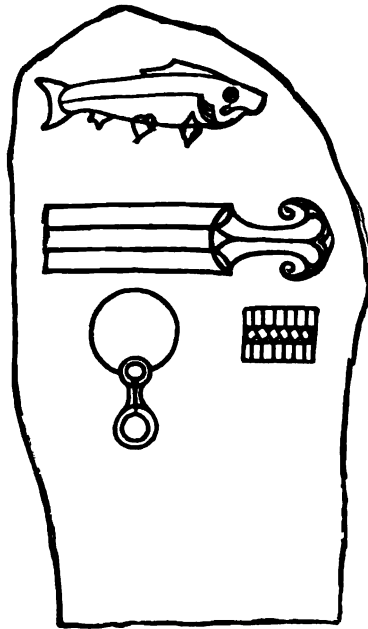
3. A spear-head, 10 inches in length, found in, or close beside, a cist at Watten, Caithness. It is of peculiar form, long, narrow, and almost lozenge-shaped in section, and has a spur-like projection at the widest part of the blade, and a long slender neck between the blade and socket. The socket is of the unclosed form, which is also characteristic of Anglo-Saxon spears.

4. A fragment of the socket portion of a large spear-head found in a cist at Dunrobin Castle, Sutherland. The cist was a remarkable one,

Saxon origin, and adds, that if it be so, it is a remarkable indication of the presence of the Pagan Saxon so far beyond the limits of the most northern kingdom of the heptarchy. But the "great hoop" which suggests the chariot-wheel is more likely to have been the rim of the shield, and the umbo is of a form which was Scandinavian as well as Anglo-Saxon. It may have been Scoto-Scandinavian.

and is thus described in a paper by Dr Ross, communicated by Mr John Stuart in May 1854:—

“The cist was about 8 feet long, the direction of its length being about from south-west to north-east. It was built in at the sides with three flat pieces of sandstone, and regularly paved on the bottom with similar pieces; below this paving was the sand mixed with round shingly stones, such as are found on the



Sculptured Stone found covering a Cist at Dunrobin Castle.

neighbouring sea-beach. The grave had been covered on the top by three flat slabs of stone, two towards the foot, common pieces of sandstone like those encircling the sides, and one larger and thicker towards the head, and having the emblems shown in the accompanying woodcut cut on its upper surface. The stone itself is irregular in shape, and quite devoid of any sculpture on its edge. The bones

found in the cist consisted of portions of two separate skeletons, both of adult men. The bones of one skeleton were hard, white, and in good preservation. Those of the other were darker in colour, and very much decayed. It seemed as if two people had been interred in the same grave, with a very considerable interval of time between."

Mr Stuart remarked "that this sculptured stone was one of a class which frequently appeared as erect pillars along the north-eastern coast of Scotland; and it was most probable that in the present case it had been diverted from its original purpose to form along with other slabs a cover for the cist. From the locality, which was frequented, and for some time possessed by the Norsemen, there was a likelihood that the cist was a Scandinavian one."

Axe-heads.—The axe was a favourite weapon with the later Vikings, as it was in earlier times with the Franks. The only axe-head in the Museum of the Viking period is the one found in the cist in Westray, with the spear-head, shield-boss, and tortoise brooch previously noticed, and presented by Mr William Rendall in 1851. It is now a mere fragment, having split and scaled off till the blade is quite thin, but enough remains to show that it was precisely similar in form to those that are characteristic of the later Iron Age in Norway—the "Skjaegöx" of the Sagas. A fragment of one similar to the Westray specimen is figured in the "Foreningen for Norske Mindesmaerker's Bevaring" for 1870, plate iv. fig. 23. It was found with a two-edged sword, spear-head, and a pair of oval bowl-shaped brooches, each of a single plate,—forming a group of relics identical with the group from the Westray cist.

Sheath-mounting.—A sheath-mounting or small scabbard-point of a form not uncommon in Scandinavia is among the objects found in one of the graves in Westray,¹ associated with objects that leave no doubt of its Scandinavian character. It measures 1½ inch in length and half an inch in diameter across the socket.

¹ See the Proceedings, vol. ii. p. 158.



1.



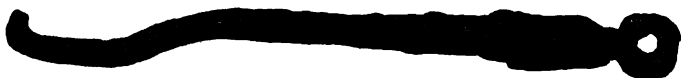
2.

1. Sheath-mounting found in a grave in Westray, Orkney.

2. View of Knob of do.

It is silver gilt, and has a grotesque figure of a human face upon the rounded knob.

Iron Sickle and Key.—The iron objects found in this grave were a knife, a sickle, and a key. This is the only example we have of the sickle, so commonly found in graves of this period in Norway. It is a thin curved blade, $5\frac{1}{2}$ inches in length. Nicolaysen notices upwards of sixty instances of the occurrence of this *sigdblad* in the Norwegian grave-mounds. This example of the key of the Viking time is also unique in Scotland. It is of the simplest form, being merely an iron rod, $5\frac{1}{2}$ inches long, having a loop at one end for suspension, and a squarish hook-like termination, somewhat similar to that of a modern pick-lock.



Iron Key from a grave of the Viking time in Westray, Orkney.

An iron key exactly similar to this one is figured in the series of photographs of objects in the Christiania Museum. It was found in a Viking grave mound at Gudbrandsdal in Norway. Another of similar form, but having two projections at the base of the hook, is also figured from a grave mound in Gudbrandsdal. They are common accompaniments of interments of this period in Norway, about thirty instances being given by Nicolaysen. Similar keys are also found in Anglo-Saxon graves in Kent.

IV. HOARDS OF SILVER ORNAMENTS.—One of the most characteristic features of the remains of the Viking period, whether in Scandinavia or in Britain, is the frequency of the occurrence of hoards of silver ornaments and silver coins, presumably the hidden plunder of Viking rovers, or the concealed stores of traders derived from the proceeds of these plundering expeditions.

Silver appears only in the Iron Age. It is never found in connection with hoards of the Bronze Age, nor does it occur in the barrows either of the Stone or Bronze period. The silver hoards of the period of which we speak, or the later "Iron Age," are characterised by certain peculiari-

ties which sufficiently distinguish them from those of the earlier period, and are usually associated with Cufic, Anglo-Saxon, and other coins, dating in or about the tenth century.

1. *Hoard of Brooches, Neck-rings, Bracelets, &c., at Skaill, Orkney.*—The most remarkable discovery of relics of the Viking period ever made in Scotland was that of a hoard of silver ornaments, ingots, coins, &c., found in the month of March 1858, between the parish church of Sandwick and the Burn of Rin, not far from the shore of the Bay of Skaill, in the parish of Sandwick and mainland of Orkney. The discovery was made by a boy chasing a rabbit into a hole, and finding a few of the fragments of silver which had been unearthed by the rabbits at the mouth of their burrow. The news of the discovery having got abroad, a number of people from the neighbourhood joined in the search, and the articles, as they were unearthed, were speedily dispersed in various quarters. Owing to the prompt and zealous exertions of Mr George Petrie, one of our Corresponding Members, to whom the Society is under lasting obligations for his services in this and many other



Bulbous Ring-Brooch (No. 1) found at Skaill,
15 inches long.

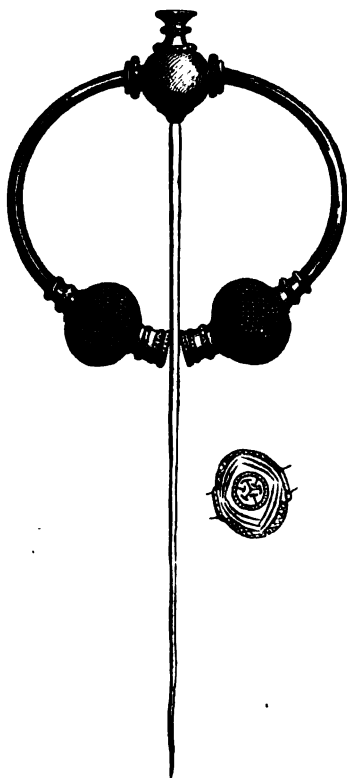
matters, the whole was recovered for the Exchequer as treasure trove, and ultimately deposited in the Museum. The aggregate weight of silver

amounted to 16 lbs. avoirdupois. It consists of nine large penannular ring-brooches, fourteen twisted neck and arm rings, twenty-three solid armillæ of penannular form, eleven ingots and bars of silver, and a quantity of fragments of brooches, armlets, &c., which had been cut or chopped up into small pieces. There were also three Anglo-Saxon coins, seven Cufic coins of the Samanian, and three of the Abbaside caliphs. The latest of the coins is one of the Abbaside series, struck at Bagdad in A.D. 945.

As this important find has not been described in our Proceedings,¹ a somewhat detailed notice of the more remarkable objects may not be out of place in this paper.

No. 1 is the most complete of the large ring-brooches. It consists of a plain penannular ring of silver, $\frac{1}{4}$ inch thick, and $6\frac{1}{2}$ inches diameter, terminating in two bulbous knobs, having a strong resemblance to thistle heads. These knobs are $1\frac{1}{2}$ inch in diameter. One-half of their surface is perfectly smooth, and the other half has a pattern of lacertine knot-work,

deeply and boldly incised, as seen in the accompanying figure. The acus, which has an ornamental head of the same bulbous thistle-like form and



Bulbous Ring-Brooch (No. 5), found at Skail, with ornament on the reverse of the bulbs.

¹ An inventory by Mr. Petrie is given in the Donation List of the Proceedings, vol. iv. p. 247.

ornamentation, is 15 inches in length, and swells slightly in the middle, where it passes from a cylindrical to a squarish section, and tapers gradually, like a large nail to a flattened point.

No. 2 is a similar brooch, wanting the acus. It is a penannular ring of silver, $\frac{1}{4}$ inch thick, and $6\frac{3}{4}$ inches in diameter, having its bulbous ends unornamented on the bulbs, but incised on the portions between the bulbs and the termination, with a T-like ornament and chevrony bands.

No. 3 is a similar brooch, consisting of a ring $\frac{1}{4}$ inch thick, and $6\frac{1}{2}$ inches in diameter. It wants the acus, but has the head still remaining on the ring. The head is furnished with a point, and the acus must have had a socket to fit on this point, to which it may have been soldered or tightly wedged on. The bulbous extremities and head of the acus of this brooch are ornamented with lacertine knot-work on the one side, and a prickly-like ornamentation, as if in imitation of thistle heads, on the other.

No. 4 is a similar ring-brooch of stronger make, but similar in its ornamentation. It is formed of a circular bar of silver, $\frac{3}{8}$ inch thick and 8 inches in diameter, terminating in bulbous ends $1\frac{1}{2}$ inch in diameter, having the one half of the circumference covered with prickly ornamentation, and in the other half a circular band of interlaced work.

No 5 is a massive and very handsome ring-brooch of the same form, with bulbous ends, having the characteristic prickly ornamentation boldly rendered. The ring is a solid bar of silver, $\frac{3}{4}$ inch in thickness, and $5\frac{1}{2}$ inches in diameter. The bulbs, as in all these brooches, are hollow; and the attenuated ends of the ring, which pass through the centre of the terminal bulbous ornaments, are hammered to a rivet head to prevent their slipping off. The ornamentation of the reverse side of the prickly bulbs is shown below the figure of the brooch. (See the fig. p. 576.)

These bulbous ring-brooches are unknown in Scotland, except in connection with this hoard. One with plain knobs, having a flattened circle on one side, similar to No. 5, and similarly ornamented, with a segmental pattern clumsily executed, was found in ploughing a field at Casterton, near Kirby Lonsdale, Westmoreland, in 1846, and is engraved in vol. vi. of the "Archæological Journal," p. 70. It is $5\frac{1}{2}$ inches in diameter, and wants the acus. Another specimen, of similar form but of extraordinary size, the ring measuring $8\frac{1}{4}$ inches in diameter, and the acus 21 inches in length, was found, in 1785, at Newbiggin, near Penrith, Cumberland. It

is figured in the "Gentleman's Magazine" for that year, p. 347. The weight of this gigantic brooch is 25 oz. avoird. The smallest specimen I know is one found in Antrim, Ireland, the acus of which is 6 inches long, and the ring only $2\frac{1}{4}$ inches diameter. They are not common in Ireland, though several specimens have been found.

On the other hand, these brooches have been found singly both in England and in Ireland, while the most recently discovered example was associated not with objects of foreign, but of distinctively native manufacture. I allude to the interesting discovery at the Rath of Beerasta, County Limerick, in 1868, of a magnificent silver chalice in which were four silver brooches. Three of these brooches were of the usual Celtic penannular form, ornamented with interlacing work. The finest of the three is gilt on the upper surface, which presents no fewer than forty-four panels of exquisitely beautiful interlaced work, 'similar to that on the Cadboll brooch, to which it also presents an interesting similarity of design in the raised bird's-head ornaments, bending over the raised border of a depressed space filled up with triquetras. The fourth brooch was one of those styled thistle-headed brooches. The chalice is elaborately ornamented with interlaced work in panels, and is assigned by the Earl of Dunraven¹ to the ninth or tenth century. Here, then, is one instance in which a brooch of this form is found associated with objects of Irish art of this period, and with them exclusively. The large size of these brooches answers to the ancient descriptions of the ornaments of Irish chiefs. We have no specimens of the ordinary penannular brooch to match the description of that worn by Midir, the great Tuatha de Danaan chieftain,² "which, when fastened on his breast, reached from shoulder to shoulder," or with pins so long as to fall under that section of the Brehon Laws, which provided for safety in a crowded assembly by enacting that, "Men are guiltless of pins upon their shoulders or upon their breasts, provided they do not project too far beyond it, and if they should, the case is to be adjudged by the criminal law."

In Denmark these bulbous brooches only occur occasionally. Worsaae figures two specimens in his "Danske Oldsager" (1859), figs. 410, 411. A few specimens are in the Museum at Stockholm, among the hoards of

¹ Transactions of the Irish Academy, vol. xxiv. p. 452.

² O'Curry's Lectures, vol. iii. p. 162.

silver ornaments found with Cufic coins chiefly in the eastern provinces of Sweden. There are also several specimens in the Christiania Museum, which have been found in Norway under similar circumstances. One of these, which was found at Vullum, near Trondheim, is exactly similar to the plain variety in the Skaill hoard. With it there were found a number of the neck rings and bracelets of twisted wires, which are also exactly similar to those found at Skaill.

The Scandinavian archaeologists agree in ascribing to these brooches an Oriental origin, concluding that they have been imported from the East by the Vikings.

Bror Emil Hildebrand, in his work¹ on the Anglo-Saxon coins found in Sweden, says (p. xi):—

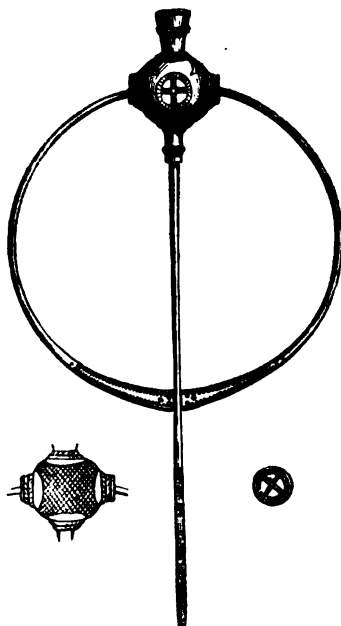
“The Cufic coins (found in Sweden in hoards, along with coins of Anglo-Saxon, German, and Danish moneyers), are generally associated with hoards of silver ornaments, for the most part large rings for the neck or the head, formed of wires twisted together; smaller rings for the arm, partly of wires twisted together, partly made of a single thin piece of silver, of which the ends are made into fastenings with a beautiful knot; bracelets, sometimes with patterns made with a punch; ingots, both complete and broken; lumps of silver, and broken pieces of the ornaments, mostly beaten together and rolled up for convenience of transport, or cut into small pieces to be used as bullion-money in exchange. There can be no doubt that these ornaments, ingots, and lumps of silver were brought with the coins from Asia, where silver is more easily obtained than in the northern parts of Europe, even if we suppose that the little silver which is to be found in the mines in the mountains of Scandinavia was known and worked at the period we speak of. This view is confirmed by the fact that somewhat similar ornaments are still worn in some parts of Asia.

“If these objects had been manufactured in Europe we ought to find them throughout the countries to which the coins that accompany them belong, but they are only rarely found in the countries bordering on the Baltic. The Cuerdale hoard in England is an exceptional instance; the treasure was doubtless carried from Sweden or Denmark to France, and then to England, where it was secreted in the ground, augmented by a quantity of French and Anglo-Saxon money. The museums of the towns in the valley of the Rhine have none of these objects, though the money of these towns is abundant in the hoards discovered by us. If we should wish to draw the conclusion that these ornaments

¹ “Anglo-Sachsiska Mynt i Svenska Kongl-Mynt Kabinettet, funna i Sverige's Jord.” Af Bror Emil Hildebrand. Stockholm, 1846, 4to, pp. xi. cix.

were manufactured in Sweden, it would be necessary to show whence they obtained the silver for their manufacture, and to say why they discontinued both the manufacture and the use of them in the eleventh century, for they are not found with money of a later date than that. The fact that these ornaments are so very frequently twisted together without the least regard to their appearance as ornaments, or broken up into bits (as the coins themselves often are), shows that both the ornaments and the coins had no value with the people who pos-

seessed them here, except the intrinsic value of the metal. Weighing scales are also frequently found with these hoards, and weights which correspond with the Byzantine weight, the *solidus aureus*, or *solotnik*, of the Russians, equal to 4.266 grammes. These objects, also, very frequently bear the marks of a cutting instrument by which they have been tested, without doubt to ascertain their purity and intrinsic value. This reveals the trafficker, and not the warrior, who carries off his spoil without any such careful examination."



Ring-Brooch (No. 6) found at Skail, with ornaments of reverse and top of its bulbous head.

$\frac{1}{4}$ inch thick and 5 inches diameter. The acus has an ornamental head of the same form as No. 1. This specimen is remarkable on account of its having a well-defined cross within a circle as the central ornament of the bulbous head of the acus. The cross is again repeated on the top of the acus, as shown in the small fig. below the figure of the brooch on the right of the acus.

Besides these bulbous brooches, there is another form of ring-brooch of which No. 6 is the best example. It differs from those previously described, in having its extremities slightly flattened and expanded, instead of swelling into the bulbous form. The ring is a bar of silver

No. 7 is a brooch of the same form as No. 6, but smaller. The ring is $\frac{1}{4}$ inch thick, and $4\frac{1}{2}$ inches diameter. The ornamentation on the expanded ends is dragonesque interlaced work slightly engraved with a very fine point. The acus is flattened at the top, and the flattened part bent round so as to form a loose collar grasping the ring of the brooch.



Neck-Ring (No. 10) found at Skail.
($5\frac{1}{4}$ inches diameter.)

No. 8 is similar in form to the preceding one but smaller, and the acus is bent into the form of a hook.

No. 9 is also of similar form but wanting the acus.

No. 10 is a neck-ring of twisted wires $5\frac{1}{4}$ inches inner diameter, and formed of three double twists spirally twisted together and intertwined with a double strand of very small twisted wires which lie in the interstices of the larger plaits. The larger wires taper slightly towards the extremities, where they are welded into solid flattened ends which are

ornamented with triangular markings, with a single dot made by a punch. One of the ends terminates in a hook which fits into an eye on the opposite end in order to fasten it when worn.

Nos. 11 to 21 inclusive, are similar rings of twisted wires, intertwined with plaited or twisted strands of very small wires. Sometimes the whole of the wires are simply twisted spirally, and in other cases they are first twisted separately in double strands, and then twisted all together.



Armlet (No. 23) found at Skail.
(3½ inches diameter.)

No. 22 is a large neck-ring of twisted wires with recurved ends terminating in spirals. The central portion of the twisted part is welded into a solid knob.

No. 23 is an arm-ring or bracelet, 3½ inches inner diameter, of very elegant design, formed of a number of double strands of wire, which are first twisted together, and then the whole of the double twists are inter-

twined spirally round each other. The wires are welded together into solid ends terminating in dragonesque heads.

No. 24 is a flat arm-band of thin metal, $2\frac{3}{4}$ inches inner diameter, tapering at both ends, one of which terminates in a hook; the other end is imperfect. The ornamentation on this bracelet consists of an impressed stamp made by a small punch of triangular form, with two raised dots in the field of the triangle. This style of impressed ornamentation is commonly found on the silver work deposited in hoards of this period. Sometimes there is one dot only in the field of the triangle, and in other cases two or three. It has been supposed to mark the Oriental origin of the silver-work, of which it is the characteristic ornament; and I noticed that



Flat Arm-Band (No. 24) found at Skail.
($2\frac{3}{4}$ inches diameter.)

this triangular impressed ornament with three dots in the field of the triangle, was used in precisely the same manner on a modern silver anklet from Algeria, in the South Kensington Museum. But, on the other hand, it occurs on a thin flat silver ring, dug up in the Island of Bornholm among burned bones, and associated with relics of the early Iron Age;¹ and in one of the hoards found in Denmark, there was one of the little amulets known as Thor's Hammers (not likely to be of Oriental origin) marked with the same ornament.² This peculiar style of ornamentation is commonly associated in the silver hoards, with an allied style of square impressed markings arranged in short rows, precisely similar to the ornamentation on the Irish Crannog pottery of the later Iron Age.

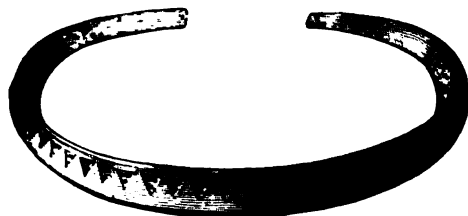
No. 25 is an arm-ring or ankle-ring, penannular in form and triangular in section, and ornamented with impressed triangles, with three dots in

¹ Bornholm's Aeldre Jernalder, in the Aarboger for Nordisk Oldkyndighed for 1872, plate i. p. 25.

² Worsaae's Afbildninger af Danske Oldsager, 1859. No. 469.

the field of the triangle. Rings of this form are the commonest of all the personal ornaments of this period, and they are constantly alluded to in the Scaldic songs and Sagas. The specimen here figured is the only one in the hoard which bears any ornament. Twenty-five others of the same form were found in the hoard, but they are all plain.

2. *Silver Armlets found at Stennis, Orkney.*—Wallace, in his description of Orkney,¹ states that in one of the mounds near the circle of standing stones at Stennis, there were found "nine silver fibulæ of the shape of a horse-shoe, but round." He figures one of them, from which we are able to identify the form, and to class them with the others as belonging to this period.



Arm-Ring (No. 25) found at Skail.
 3¼ inches diameter.)

3. *Silver Armlets found at Caldale, near Kirkwall.*—A number of penannular silver armlets were found at Caldale, near Kirkwall, in 1774, along with a horn containing about 300 silver coins of Canute the Great. One of these, figured by Richard Gough in his "Catalogue of the Coins of Canute,"² is of the same form as those found at Skail.

4. *Silver Armlets found at Quendale, Shetland.*—In November 1830, six or seven armlets of silver, of this form, were found at Garthsbanks, Quendale, Shetland,³ along with a horn full of Anglo-Saxon coins of Ethelred, Athelstan, Edwy, and Eadgar. They were found in the ruins

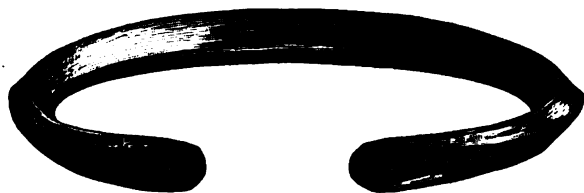
¹ An Account of the Islands of Orkney, by James Wallace, M.D., London 1700, p. 58.

² Catalogue of the Coins of Canute, King of Denmark and England, by Richard Gough, London, 1777, 4to.

³ MS. Letter in the Society's Library.

of a built structure, and with them there were four or five "broken stone basons," or steatite pots.

5. *Silver Armlets found at Kirk o' Banks, Rattar, Caithness.*—In 1872 some workmen, in cutting a drain through an ancient enclosure on the southern shore of the Pentland Firth, in which there is an old chapel called "Kirk o' Banks," near the mouth of the Burn of Rattar, came upon a small cist, the cover of which was about 2 feet long by 18 inches wide, and lay about 6 inches under the surface. The cist was filled with earth and small stones, among which eight penannular silver armlets of the form here figured were found.¹



Penannular Silver Armlet, found in a Cist at Kirk o' Banks, Caithness.
(3 inches diameter.)

The discovery was made known to the Procurator-Fiscal at Thurso, by whom the armlets were secured for the Exchequer, and subsequently five of them were presented to our National Museum by the Lords of H.M. Treasury, through Stair Agnew, Esq., Queen's and Lord Treasurer's Remembrancer for Scotland, and the remaining three were deposited in the Museum at Thurso.

These armlets have a general correspondence in size, form, and weight with those in the great hoard at Skail; but they differ slightly in having their extremities hammered flat, and rounded off at the ends. If we are to accept the Scaldic stanzas in the Saga of King Hakon Hakonson in their literal sense, it would seem that in 1263 King Hakon, then on his way to Largs, levied a tribute in "rings" from Caithness.

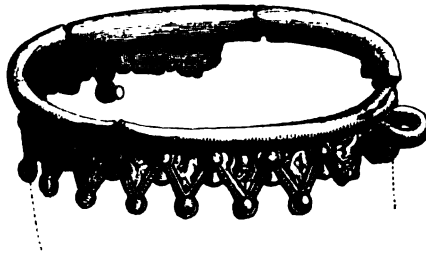
6. *Silver Armlets found in Skye.*—There are in the Museum two silver

¹ See communication by Mr Campbell, schoolmaster, Dunnet, in the Proceedings, vol. ix. p. 422.

penannular armlets of this form, with broken fragments of four more, which were found in a sepulchral mound in the island of Skye in 1850, and presented by Dr Daniel Wilson in June 1863.

7. *Silver Armlet found in Kirkcudbright.*—The flat silver armlet found with an amber bead in a cairn at Blackerne, Crossmichael, Kirkcudbright, ornamented on the flat side with parallel markings made by a chisel-shaped punch, is precisely similar in character to some of those found at Cuerdale, and probably belongs to this period, although there is nothing to connect it decisively with the Scandinavian incursions into Galloway.

8. *Silver Mounting of a Drinking Horn found at Burghead.*—The silver mounting of the end of a drinking horn, here figured, which was found at Burghead in the course of the excavations for the formation of the new town of Burghead previous to 1826, is so similar in character to the very common relics of this kind in Scandinavia, that there need be no



Silver Mounting of a Drinking Horn found at Burghead.
(2½ inches diameter.)

hesitation in assigning it to the Viking period of the Northmen. Burghead is in the parish of Duffus, the Dufeyrar of the Orkneyinga Saga,¹ and was at an early period a fortified settlement of the Northmen.

V. BEAKER OF GLASS, FOUND IN A GRAVE IN WESTRAY.—Beakers of glass are not rare in Scandinavian grave-mounds of the early Iron Age, though they are perhaps more common in Anglo-Saxon graves in the south of England. The Anglo-Saxon forms, however, are different from the Scandinavian, and mostly belong to an earlier period than the Viking

¹ See the Orkneyinga Saga, Edinburgh, 1873, pp. 114, 123.

time. The specimen in our Museum is a very thin milky-coloured glass vessel, with plain lip and sides, and a flat bottom, ornamented with a double raised moulding round the centre. It was presented by the Rev. Dr Brunton in March 1827, and is described as having been "found in a stone coffin in Westray, and the only specimen hitherto discovered."

VI. SCOTTISH OR CELTIC BROOCHES, &c., FOUND IN VIKING GRAVES IN SCANDINAVIA.—If it be an interesting illustration of the early relations of the Northmen with this country to find these peculiarly Scandinavian

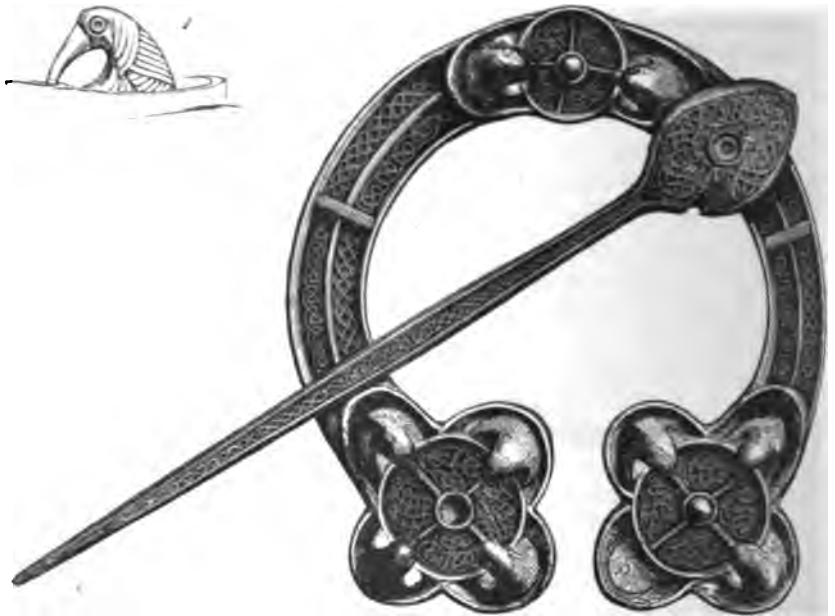


Silver Brooch, with Interlaced Work, found in Sutherlandshire.
(In the possession of R. B. Æ. Macleod of Cadboll, Esq.)

relics in Scotland, associated with their Pagan burial customs, it is no less interesting to find that our Celtic brooches are occasionally dug up in Sweden and Norway, and sometimes associated with the Pagan custom of cremation. The art of these Celtic brooches of this particular form and style is, I think, as clearly Christian¹ as that of the tortoise brooches is

¹ Sometimes, as in the case of the brooch found in King's County (Arch. Jour., xxx. 184), the cross appears as one of its ornamental decorations. In the Museum we have a very remarkable bronze brooch of this class which has the cross combined with the penannular form as part of the brooch itself.

Pagan. Their style of ornamentation (which is well shown in the examples figured on pp. 587-8) is that which was so beautifully elaborated, first in the Celtic MSS. of the 7th, 8th, and 9th centuries, and subsequently on the sculptured stones and monumental crosses, and on the metal-work—the shrines, bell-covers, crosiers, &c.—of the early Celtic



Silver Brooch, with bird's head ornaments, found in Sutherlandshire.

(In the possession of R. B. *Æ.* Macleod of Cadboll, Esq.)

Church, as well as on the personal ornaments of the rich and great of the time. It is not my purpose to trace the development of this style of art, or to establish the sequence of its application to the work of the pen, the chisel, and the graver, as exemplified in the MSS., the memorial sculptures, and the metal-work. But that the period of this

work upon brooches and personal ornaments is that of its latest development may be inferred, I think, from a consideration of the natural circumstances of the case. The art was perfected by the scribes before it was adopted by the sculptors and jewellers. The elaborate intricacy of detail, which is one of its most special characteristics, could never have been developed in stone or metal-work. Its most complicated designs, flowing easily from the pen, might be copied in the more durable material, but they could scarcely have originated, and certainly they would never have arrived at such perfection, if the artists by whom they were elaborated had been merely workers in stone or metal. The Earl of Dunraven, describing the Ardagh brooches (which were found in the magnificent silver chalice before alluded to, says:—"Judging from a comparison of the dates already fixed of MSS. and metal-work, it would seem that the art of the scribe preceded that of the jeweller; and when the latter reached its highest development, the former was already declining." On this view, the best period of the metal-work had not been reached before the ninth century, which brings the approximate date of these magnificent brooches quite within the Viking period. Accordingly, we find them occasionally appearing in connection with Viking remains in Scandinavia.

In the Stockholm Museum there are two specimens of these Celtic brooches, dug up in Gothland. They are described by Mr Montelius, in his "Brief Description of the Museum,"¹ as "having been brought over from Scotland, or perhaps, rather made after a Scottish pattern."

It is suggestive of the imitation by Scandinavian artists of the work of the Celtic school, that we sometimes find both the Celtic and the Scandinavian styles combined, as in the case of the magnificent sword found in the grave-mound of a Viking at Ultuna, Sweden. The circumstances of its discovery are thus related by Dr Oscar Montelius, in his newly published work on Prehistoric Sweden:—²

"One of the most remarkable discoveries of the middle period of the Iron Age³ was made in 1856, in a tumulus at Ultuna, near Fyrisa, to the

¹ Statens Historiska Museum, Kort Beskrifning til Vägledning för de Besökande, af Oscar Montelius, Stockholm, 1872, p. 55.

² La Suede Préhistorique, par Oscar Montelius, Stockholm, Paris, and Leipzig, 1884, p. 114.

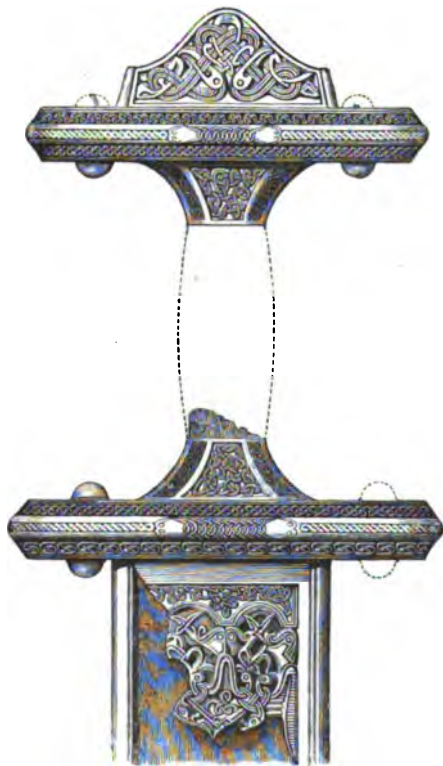
³ Dr Montelius divides the Iron Age of Sweden into three periods, styled respec-

south of Upsala. The tumulus contained the remains, still distinctly visible, of a ship in which a warrior had been entombed along with his arms and two horses. The iron nails which fastened the planks together were still visible in their places. The vessel appeared to be a galley of no great size, carrying a single mast. Alongside of the body, which was unburnt, was found a sword, the blade of iron, and the splendid hilt (which is here figured) of gilt bronze is decorated with interlaced patterns of extreme beauty and elegance. Remains of the wooden sheath and its gilt mountings were also found. A helmet of iron was also found, having a crest or ridge of bronze, containing zinc as an ingredient—the only helmet of the pagan period in Sweden hitherto known. There were also found a magnificent umbo or boss of a shield, in iron plated with bronze, and adorned with patterns of interlaced work, the handle of the shield, nineteen arrow heads, the bits of two bridles, a pair of shears, all in iron; thirty-six table-men and three dice, in bone. Besides these there was an iron gridiron and a kettle of thin iron plates rivetted together, with a swinging handle, as also bones of swine and geese, probably the remains of the funeral feast. The burials of this period, however, have usually the remains of the incinerated bodies.”

I have figured here one side of this splendid specimen, and it will be seen on comparing the details of its ornamentation with that of the Scottish brooch figured on p. 588, that the style is identical, and the patterns are even to some extent the same, while it also exhibits traces of the Scandinavian style, and on the opposite side has a pattern which is purely Scandinavian in style and treatment. If the Scandinavian archaeologists are right (as I think they are) in calling this a style of art imported from Scotland, the archaeological interest of the facts, as distinct from the artistic, lies in this imported style of Celtic Christian art being found in Scandinavia associated with all the accompaniments of heathenism, and specially with the custom of cremation of the dead.

tively the Early, Middle, and Later divisions of the Iron Age. The Early Iron Age, commencing with the Christian era, reaches to A.D. 450; the Middle Period extends from A.D. 450 to A.D. 700, and it is to the close of this period, or the seventh century, to which this pagan interment, with its remarkable works of art are referred; while the Later Iron Age, extends from A.D. 700 to the close of the eleventh century. It is to this latter period that our Scandinavian relics belong.

In the Christiania collection there is also a most beautiful example of a Celtic brooch of this period. In form it resembles the Hunterston Brooch,¹ the body of the brooch being closed instead of open and penan-



Sword hilt found in a Grave-mound at Ultuna, Sweden.

nular. The Norwegian archæologists describe it somewhat happily as "padlock-shaped." It is ornamented on both sides, and has been set with glass or amber. A photograph of it is given (C 758) in the series

¹ See the figure of the Hunterston Brooch in the Proceedings, vol. vii. p. 462.

presented to the Society by His Majesty the late King of Sweden and Norway, which I now exhibit. I find from Nicolaysen's "Norske Fornlevninger" that it was dug up in the glebe of the parish of Snaasen, in North Trondheim before 1836, and that several tortoise brooches were found about the same place, but, unfortunately, there are no more precise descriptions of the circumstances of the find. The brooch, however, will speak for itself, and there can be no doubt as to its identity with the Scottish and Irish forms.

In the Museum at Christiania I also saw about twenty fragments of similar workmanship, all exhibiting the same character, and obtained a promise from Professor Rygh to give us electrotypes of them, with notices of the circumstances in which they were found,—a promise which I trust he will live to fulfil. In general terms, he told me that they were found in Viking grave-mounds, and that they did not consider them to be of native origin or workmanship.

I find also in the Annual Report of the Society for the Preservation of the Ancient Monuments of Norway at Christiania, an account of the exploration of a number of small round grave-mounds at Nordre Gjulem in Rakkestad. In one of these there was found, in 1866, among ashes and burnt bones, a bronze brooch of unusual form,¹ and of exquisite workmanship, along with one of a set of the bone dice so common in Norse graves. "This brooch," says the report, "is of the form of which No. 427 in Worsaae's Oldsager is an example. [Brooches of this form are not known in Scotland, but the form occurs in Ireland adorned with Late Celtic ornamentation.] They are not common in Norway. Besides the present specimen there is one in the Bergen Museum, and two in the collection of the Scientific Society of Trondheim. They are all ornamented in the same peculiar style—a style which does not seem native to Norway, but may have been brought over from Scotland or Ireland, where it is found alike on personal ornaments and on sculptured monumental slabs and crosses."

It is suggestive that in the Irish example, which bears the closest resemblance to this Norwegian one, we have a combination of the peculiar ornamentation characterised by the divergent spiral or trumpet-pattern,

¹ Only four of these brooches have been found in Norway. Foreningen, 1870 p. 50.

and known as "Late Celtic," with the interlaced ornamentation characteristic of the (later) Christian Celtic period. We have thus in the Irish example the blending of the two styles of the ornamentation of the Celtic metal-work, the earlier of which never appears in Scandinavia, while the later style, which is most characteristic of our Christian MSS., monuments, and metal-work, is found as an importation into Scandinavia, adopted by Scandinavian artists, and adorning the weapons deposited with the bones of heathen Vikings. Traces of this peculiar art are found abundantly in the later Christian period of Norway, in the splendid wood-carvings which decorated their churches; while, singularly enough, it survived in Scotland to be applied to the ornamentation of Highland shields, dirk-handles, and powder-horns.

In closing this paper I must plead guilty to a greater amount of diffuseness and discursive treatment than I had anticipated before addressing myself to its details. This, however, is unavoidable in the case of a first attempt to group together the relics of what may be termed the Heroic Age of Scottish history—a period of singular interest alike in connection with its history, its archaeology, and its art. It seems to me, also, to have an important bearing on the chronology of Scottish archaeology if I have been able to show that in certain areas there was an overlapping of the heathen burial customs within the Christian period, and that, consequently, a distinction must be observed between this intruding cremation and the older cremation of the native heathenism. I think it is conclusively established by the facts that I have adduced, that the custom of cremation was not extinct (as it is usually represented to have been) when the Norsemen were settling on our northern shores, establishing the earldom of Orkney and the kingdom of Man and the Isles, and founding the dynasties of the Hy Ivar in Limerick and Dublin.

And I cannot conclude without expressing the hope that the Iron Age of Scotland (which is so much less worthily represented in our Museum than any other period) will receive a greater share of the attention of our active archaeologists; and that the most interesting specimens of this period, among which I would specially notice the two splendid brooches exhibited by Mr Heiton of Darnick, a Fellow of the Society (which I regret that I have been unable to engrave), and the still more magnificent brooches now called of Hunterston and Cadboll, may yet be brought out

of their comparative obscurity to become the pride and ornament of our National Collection, and representative examples to all future ages of a style of artistic workmanship unrivalled in any period of our country's history.



Bronze Brooch in the Dunrobin Museum.

III.

NOTES ON SOME ANCIENT CHAPELS AND OTHER REMAINS IN THE ISLAND OF MULL. BY J. W. JUDD, Esq., F.G.S., ETC. COMMUNICATED THROUGH THE REV. J. M. JOASS, CORR. MEM. S.A. SCOT.

RUINED CHAPEL OF PENNYGOWN, ISLAND OF MULL.

This chapel is situated about $1\frac{1}{2}$ miles east of Salen, on the road to Craigmora. The burial-ground round it is still used for interments. The internal dimensions of the building are 40 feet by 17 feet. The building is placed in true position; the altar at the east end. The walls are constructed of blocks of basalt and felstone from the immediate neighbourhood,—the little carved work of the doors and windows being wrought in a freestone of the cretaceous rocks (Upper Greensand), which must have been brought from Gribun, Inch Kenneth, or Morven. The same material is similarly employed in the buildings of Iona. There is only one door, which is situated not in the usual position of the principal entrance of churches (namely the south-west), but at the north-west. Its dimensions are 6 feet 3 inches high by 2 feet 10 inches broad; it is round-headed, and surrounded by a continuous, simple, but not very